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AMERICAN ARTISAN and Hardware Record

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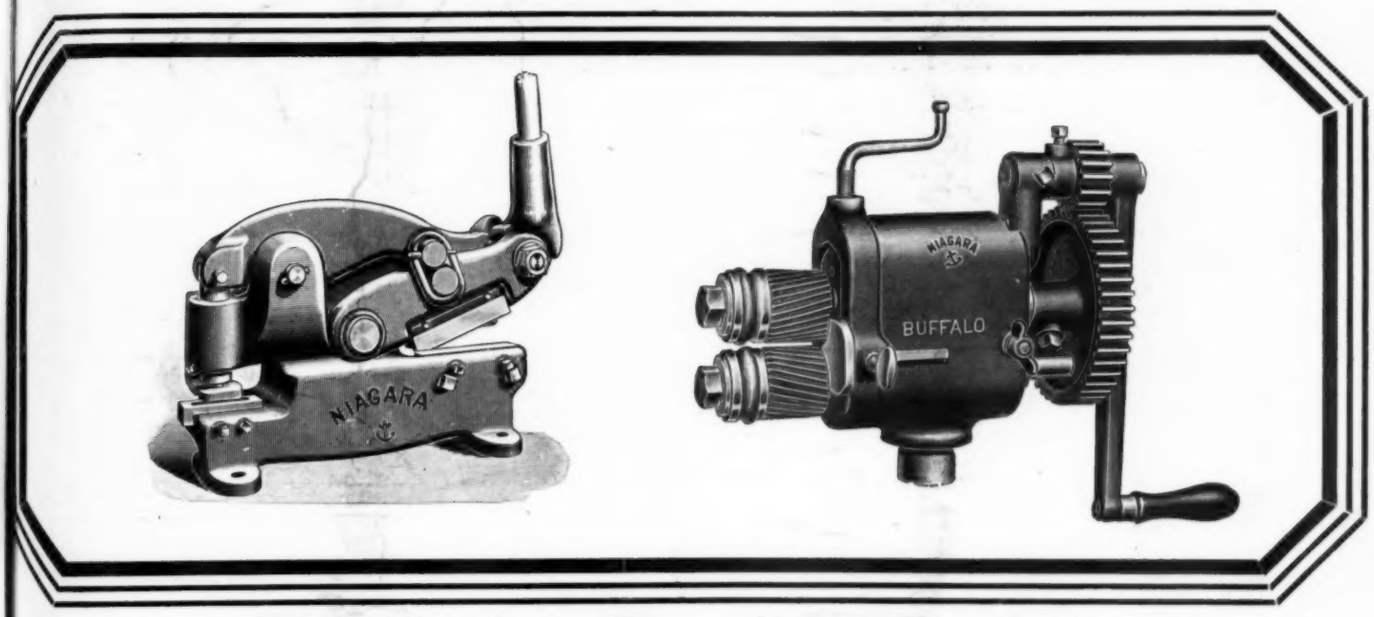

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NIAGARA MACHINE & TOOL WORKS

BUFFALO, NEW YORK

Published Weekly. Entered as Second-Class Matter June 25 1885 at the Post Office at Chicago Illinois under Act of March 3rd 1879

ALPHABETICAL INDEX AND CLASSIFIED LIST OF ADVERTISERS, Pages 46 and 47

MAHONING HEATERS

Sell Themselves

So many superior qualities are involved in **MAHONING** construction that to tell of one would slight others equally as important.

No need to ***talk*** Mahoning qualities. ***Show*** your customer,—he will see it at a glance.

We want good live dealers everywhere, and offer a tempting proposition.

A style and size for every purpose.

MAHONING TYPE "C"

Illustration shows quite clearly the combustion as it takes place in the Mahoning system. Note how the admission of air through the slots in the firepot causes combustion to take place all around the outside of the fire. The hottest part of the flame is in direct contact with the outside surface of the heater where the radiation of heat takes place. Only one of the features that have made the Mahoning famous from coast to coast.

The MAHONING FOUNDRY CO.

YOUNGSTOWN, OHIO

A Mammoth Plant With a Mammoth Production

THE NEW IMPROVED NESBIT FURNACE

A remarkable heater, which burns equally well—either hard or soft coal, wood or lignite.

All Cast Iron, with very large radiator, high combustion chamber, large feed-door, and casings twice the diameter of the fire-pot.

The Nesbit 900 Series will satisfy you and your customers. Made in three sizes, either PIPE or PIPELESS. We will gladly send descriptive matter and prices.

"Quality and Service" ***"Everything in Furnace Supplies"***

STANDARD FURNACE & SUPPLY CO.

UNION STATION P. O. OMAHA, NEBR.

ESTABLISHED 1880
Representative of
The Hardware, Stove, Sheet Metal, and Warm Air Heating and Ventilating Interests
PUBLISHED EVERY SATURDAY

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Vol. 79. No. 14. CHICAGO, APRIL 3, 1920. $2.00 Per Year.

Booming Building

RETAILERS WHO IN ordinary times do a good business in builders' hardware are unfavorably affected by the slowing down of building operations. There is only one way to overcome adverse conditions in this field, and that is educational publicity. Especially in places where community organizations are in force, the hardware dealer should lend his influence to the spread of right ideas with regard to the revival of building. As pointed out by the Manufacturers Record, the country needs a million dwellings or more. They must be built or else the housing problem will assume serious proportions and intensify the social unrest which threatens the stability of our institutions.

The educational propaganda should be carried first to the business men of the country. Indeed, the initiative must come from them rather than from the working people. An example along this line is furnished by the business men of Baltimore, Maryland, who have been noted for their extreme conservatism. Today they are carrying on an amount of building of dwellings, apartment houses, manufacturing plants, and warehouses greater than ever before in the history of Baltimore, with the exception of the period immediately following the big fire. Thousands of dwellings are under construction. Many apartment houses costing from $100,000 to $1,250,000 are in course of building. If the extreme conservatism of Baltimore business men justifies the vast building activities in that city, surely there is no other city or town in which the same forces for upbuilding should not be aggresively at work. Persistent publicity will achieve this desirable effect.

Tax Laws Revision Is Urged.

TO A CONSIDERABLE extent, business is hampered by unscientific tax methods. That is why Secretary of the Treasury Houston recommends immediate revision of income and profits tax laws at this session of the Congress. His views are set forth in a lengthy letter to the House Ways and Means Committee in response to a recent verbal request by Representative Fordney, chairman of the committee, for his recommendations, particularly with respect to amendments made desirable by the recent decision of the Supreme Court holding stock dividends not taxable as income.

Secretary Houston minimized the effect of the stock dividend decision, saying the entire net loss probably would not amount to more than $25,000,000 after deducting various sums which will be gained in other ways.

So far as other matters were concerned, Secretary Houston said there was imperative need for prompt action at the present session with a view to making whatever new methods of taxation are adopted, effective for taxes based on the earnings of the calendar year 1922. Secretary Houston said if revenue revision were delayed until next winter it probably would not be possible to make the changes effective before the beginning of the year 1923.

Modification or repeal of the excess profits tax at the earliest possible date was one of the most urgent recommendations made by Secretary Houston, who proposed a flat rate of 20 per cent on profits of corporations in excess of distributed earnings, in place of the present graduated rates of 20 and 40 per cent. He urged also that corporations should be given the right to pay dividends in bonds or promises to pay bearing a fair rate of interest which are taxable to the stockholders as ordinary dividends. Under this procedure he said, the corporation could retain its profits for use in the business and yet convert the profit tax into a genuine income tax. The excess profits tax would become a flat tax on undistributed earnings. The plan contemplates eliminating from the excess profits law all reference to the use of "invested capital." It is planned also to place the taxation of incorporated and unincorporated business concerns so far as may be on substantially the same basis.

Danger of Inflation

THAT THE HIGH cost of living could be directly traced to the inflation of bank credit and currency and that profiteering had merely quickened the price advance by taking advantage of steadily rising market values, was the declaration of Frank A. Vanderlip, former president of the National City Bank, New York City, at a recent luncheon of the New York Electrical League. Whereas there had been an increase of 104 per cent in bank deposits and a 68 per cent increase in currency during the last six years, he said, the actual goods produced and available for purchase had increased only 6 per cent. The return to normal would be painful. He entertained little hope of deflation being accomplished, but affirmed that it was all-important that inflation be checked. This would involve a broader economic view on the part of bankers,

industrial leaders, business men, the Federal Reserve Board, etc., than now current.

Mr. Vanderlip explained that a sound basis for American prosperity would exist only in the presence of an ample supply of capital, an efficient labor supply and recognition of the fundamental economic laws. He said that while on the surface everything might appear to be running smoothly, the supply of banking credit had been seriously depleted, and that funds for investment were no longer available. The taxes now enforced, he continued, had dried up the usual source of capital, namely, large incomes, while the more numerous class of investors developed by the Liberty loans was not accessible in one case because the advance in prices without commensurate increase in compensation had destroyed the possibility of saving, and in the other because of past and prevalent extravagance where wages had kept pace with prices. He urged the encouragement of a national policy of thrift which would provide for a division of spending between consumption and production of goods. Thrift in this sense, he asserted, did not involve miserliness or hoarding, but would increase productivity and raise the general standard of living.

Respecting labor, which he estimated was only 60 per cent efficient now, Mr. Vanderlip, admitting that workers in this country were led in some instances by demagogues and adhered to entirely fallacious economic principles, losing sight completely of the relation between the amount of wages and the amount of work, placed part of the blame for present unrest on the employers. He emphasized the need for a "spiritual revival" on both sides, which would be based on "intelligent selfishness," as it would mean increased production and a large division for both. That a solution could be brought about he felt confident, noting with satisfaction the broader vision indicated on the part of many manufacturers.

Let Us Use Advantages.

It is easy to find fault with anything, because nothing is perfect. It is well to have a clear notion of the defects of a commodity or service in order that we may take measures to lessen or eradicate them. But fault-finding as a habit is rarely helpful. It leads to pessimism. By exaggerating the imperfections which it criticizes, it discourages rather than stimulates ambition. As a rule, fault-finding is destructive instead of being constructive. Just now, we as a nation are going through a period of fault-finding. We are closing our eyes to the wonderful achievements of business and industry and opening them only to the minor evils distorted out of proportion by having no correcting perspective by which to judge them. We need to break away from this tendency because it is harmful to us.

Our new Secretary of Agriculture, Mr. Meredith, perceives the menace of national fault-finding. He declares that "it is poor advertising to be talking all the time about the waste, and about grafters, and about soft snaps and all that. There may be some one standing around who believes you mean it. There may be some foreigner who is not acquainted with our ways over here, who goes out and repeats your statements to others. How many of us simply fall into the habit of complaining and criticizing. It is poor advertising to draw attention to the weak spots, lest the impression go forth that the nation is weak. We have no reason to whine or complain over our present condition or the results we have achieved. If the occasion again arises, we will do the job better than we did before, not because of the mistakes we made, but because of the inspiration and confidence drawn from our past achievements."

To use the loud pedal on the high cost of living interferes with harmony and results in false impressions. The truth is that it is not a serious problem at all, but merely a matter of relative values. Take the figures from New York State, for example. William C. Redfield, former Secretary of Commerce, says that assertions that the high cost of living in New York is "a serious problem" are disproved by the deposits in savings banks of the state.

"Let us get rid of this talk of unmitigated suffering among our poor people," said Mr. Redfield. "For the $2,267,395,000 in savings bank deposits in this state alone is spread over accounts totaling 3,600,000, or, in other words, one person in three has $500 to $600 put aside in the savings banks. It certainly adds cheer to our lot to know that the people in this state are stacking up and putting away three-quarters of a million dollars every day."

Merchants and contractors whose business brings them into close contact with the people can do much to overcome the pernicious effect of fault-finding. Let them disprove the high cost of living fallacy by pointing to facts such as Mr. Redfield indicates. Let them emphasize the advantages of this marvelous period of prosperity. There is less avoidable poverty in America today than there ever has been in the history of our Republic. Everyone who wants to work can find employment at high wages. The world has altogether too much to do today to waste its time in complaints. We need more production and less fault-finding; more use of our advantages and less talk about our troubles.

Less Talk, More Work

In the Welter of remedies offered for the prevailing industrial troubles, there is one which is simple, practical, and easy of application. Indeed, it is so simple and obvious that it needs constantly to be brought to the notice of the people. It has been set forth dozens of times in these columns. It is here repeated because only by such repetition can we hope to get it translated into action. Charles M. Schwab has recently phrased it in these forthright words: "There is but one way that I can see to decrease the cost of living and that is for everybody to get together and get to work." As befits a man of leadership Mr. Schwab has unbounded faith in the future of this country. He does not believe it is going to be overrun by Bolsheviki, but he believes that a fine industrialism will eventuate from the strange conglomeration which now puzzles us. He is not alone in his belief that the way to cut down the cost of living is to work. It was the eloquent plea of Clemenceau. It is that of President Deschanel of France. It was Wilson's, and now

it is the adjuration of every thinker who knows wherein the economic salvation of mankind lies.

RANDOM NOTES AND SKETCHES.

By Sidney Arnold.

When one reflects that in a democracy a person from practically any walk in life may reach a place of public trust, and that the welfare of the state must at all times depend on the honesty and right motives of its citizenship, and, at least in crucial periods like the present, on self-sacrifice, the importance of a common basis of right conduct is readily appreciated. The glimmer of a waiter's eye, as he peers from his proper distance to detect the size of a coin laid on the tablecloth, is not reassuring when one imagines this man, who very likely is a voter, in a place where ctizenship is tested. That the state should permit, unrestricted, the development in unnumbered communities of large groups of persons virtually schooled to obtain a livelihood through constant manifestation of the mercenary spirit seems a policy too short-sighted to be tolerated.

* * *

The latest Irish contribution to international good humor is narrated as follows by my friend Thomas E. Henry of the Henry-Miller Foundry Company, Cleveland, Ohio:

Nora met her former employer, Mrs. Jolson, on the street the other day.

Nora, it seems, was being paid by check at her new place of employment. But so far no one had been able to persuade her to have any of the checks cashed. At Mrs. Jolson's offer to identify her at the bank, Nora suggested instead:

"Sure, an' why couldn't you take thim and put thim in your bank, an' when I come up to see you, you can be after givin' me the money?"

"But," demurred Mrs. Jolson, "what if I did and you should die, there would be nothing to show that I had your money?"

Said Nora, eager to persuade: "Begorra, an' haven't you as much right to be cheatin' of me as anybody else?"

* * *

My friend John H. Hussie of Omaha, Nebraska, Secretary Western Warm Air Furnace and Supply Association, sends me the following laugh-producer

Fairfax Fayette, whose home is famous for its Southern hospitality, telephoned his wife at the eleventh hour that he was bringing a party of six to dinner.

An inventory of the cupboard and ice-box showed short rations. So Mandy, the cook, was instructed to phone for certain supplies.

Wishing to supplement the order, Mandy's mistress followed her to the telephone, and heard:

"I wants six dozen sof'-shell crabs an' ef yo' doan' get 'em heah mighty quick I'll skin everyone of yo', yo' low down white-trash." A brief silence, then: "Who is dis? Dis is Mrs. Fairfax Fayette, dat's who dis is, an' I means every word I says!"

"Mandy! Mandy!" cried the astonished and outraged mistress. "What do you mean? How dare you say such things?"

"Lawsy, ma'am," returned Mandy unconcernedly, "dat's all right. I talks to 'em like dat fo' yo' all de time!"

* * *

A good story should be kept in circulation, according to my friend P. J. Strangward, General Manager Forest City Foundry and Manufacturing Company, Cleveland, Ohio. That is why he told me this tale:

There was recently haled into an Alabama court a little Irishman to whom the thing was a new experience. But he was unabashed and wore an air of a man determined not to "get the worst of it."

"Prisoner at the bar," called out the clerk, "do you wish to challenge any of the jury?"

The Celt looked the men in the box over very carefully. "Well, I tell ye," he finally replied. "Oi'm not exactly in trainin', but Oi think Oi could pull off a round or two with that fat boy in th' corner."

* * *

Someone at the Hardware Club asked my friend Robert C. Johnson, National Screw and Tack Company, Chicago, Illinois, this question:

"Do people who sleep with their mouths shut live longest?"

"I don't know," he replied, "but they escape a whole lot of trouble."

* * *

If you drive a motor car you will get at least a smile out of this brief bit of dialogue sent me by my friend Alex Glass of the Whitaker-Glessner Company, Wheeling, West Virginia:

Flivver—What's the most you ever got out of your car?

Second Ditto—I think seven times in one mile is my record.

* * *

Here is a good one from my friend Martin Engelhardt, hardware dealer of Chicago:

Smith—What's this near-beer that they sell now like?

Jones—Well, it's just like having your girl throw you a kiss. The sentiment is all right, but you don't get any real thrill.

* * *

Every time you overcome fear or conquer trouble you strengthen yourself for further victories. That is why I commend to the reflection of all my friends the following lines from a newspaper clipping:

Overcoming Fear and Trouble.

I did pretty well with that trouble I had,
  That trouble that frightened me so;
Now it's over I think I've a right to feel glad
  That I didn't give in to a blow.
For a while it appeared that I couldn't succeed,
  I was tempted to give up the fight,
But now that it's over I'm happy, indeed,
  To think that I came out all right.

I nearly gave up when the thing looked so bad,
  I had almost decided to quit;
I'm surprised at myself at the courage I had,
  And I'm glad that I have so much grit.
When the next trouble comes I shall stand up and fight
  And meet it the best that I can;
I've reached the conclusion that trouble's all right,
  It brings out the stuff in a man.

AMERICAN ARTISAN

ARTHUR F. FRAZEE.

Profound changes have taken place in the psychology of business during the past five years. Science has been brought more thoroughly into the service of commerce. The methods and principles of laboratory research have been successfully applied to the production and distribution of commodities. Merchandising, which formerly proceeded along lines of class and trade distinctions, has acquired a new trend in the direction surveyed and mapped out for it by experts whose training is essentially scientific.

Old truths, which were kept within the confines of academic discussion, have been released and their force carried into shop and marketplace. The schoolmaster is in demand in the factory and countingroom because precision of knowledge and accuracy of ideas have been found of vital import to industry. More and more ground is being gained for the recognition of the fact that business is the science of human nature.

It is in step with this sort of progress that Arthur F. Frazee, formerly superintendent of schools of Dowagiac, Michigan, has been induced to accept the position of Secretary and Advertising Manager of the Rudy Furnace Company, Dowagiac, Michigan. As an educator, he has studied human nature and is adept in applying old truths to new conditions. As advertising manager, he is necessarily an educator because the function of advertising is to teach and through teaching to develop desire for a particular commodity or group of commodities.

One of the old truths, voiced centuries ago by Cicero, is that "all the arts appertaining to man have a certain common bond and are, as it were, connected by a sort of relationship." The merits, advantages, usefulness, and comfort of the warm air heaters manufactured by the Rudy Furnace Company are, therefore, matters of education as much as the details of geography or arithmetic. It is just as important to learn the benefits to health derivable from the warm air heating system as it is to receive instruction in history and penmanship.

The value of the skilled educator to a business is that he is not hampered by class or group prejudices. As G. Bernard Shaw phrases the thought in his preface to *Major Barbara,* "in nothing have the masterminds of the world been distinguished from the ordinary suburban season-ticket holder more than in their straightforward perception of the fact that mankind is practically a single species, and not a menagerie of gentlemen and bounders, villains and heroes, cowards and daredevils, peers and peasants, grocers and aristocrats, artisans and laborers, washerwomen and duchesses, in which all the grades of income and caste represent distinct animals who must not be introduced to one another or intermarry. Napoleon constructing a galaxy of generals and courtiers, and even of monarchs, out of his collection of social nobodies; Julius Caesar appointing as governor of Egypt the son of a freedman—one who but a short time before would have been legally disqualified for the post even of a private soldier in the Roman army; Louis XI making his barber his privy councillor; all these had in their different ways a firm hold of the scientific fact of human equality."

Arthur F. Frazee is certain to achieve noteworthy success in his new position because he knows how to apply these fundamental facts to the requirements of business. During the three and one-half years in which he served as superintendent of the Dowagiac schools, he gained a reputation for efficiency second to none in the State of Michigan. He has spent all of his life going to school or teaching school. He won his A. B. degree from Michigan and his A. M. from Columbia University.

He is gifted with a keen, analytic mind and possesses the faculty of being companionable in the genuine sense of the word—a faculty which many shrewd men of affairs consider indispensable to true salesmanship whether printed or oral. He is interested in his fellowmen. He likes to make friends. He believes in and practices the gospel of service because it leads to happiness and prosperity. His training has fitted him to understand people and to make allowance for the human equation in every transaction. He started or gave the impetus for the organization of a Rotary Club in Dowagiac.

HALL OF FAME

CHARLES W. LAMMERS.

It is possible to build a house without drawing plans on paper in advance of the work; but it is impossible to do so without having in mind some definite ideas as to size, form, and materials. In order to get such ideas, other houses must be known and studied. It is, to say the least, extremely doubtful that a man who never saw a house could design and build one. In other words, when we come to analyze our ideas and our knowledge, we find that they are made up of impressions and experiences outside of ourselves. The alphabet which we use in reading and writing comes to us through centuries of evolution. The hammer which we sell across the counter of our stores is the product of the thought and skill and experience of countless numbers of our fellowmen. Whatever originality you may be able to bring into play, therefore, is not new in the sense of being entirely different from anything that has gone before. It is new only in rearrangement or combination of existing things or ideas or experiences.

It stands to reason, therefore, that in order to benefit most from the vast mass of experiences and ideas rendered available to us by social and industrial intercourse we should have some model or some standard as a guide. To all of us in theory at least there is the same avenue to success. For all of us, there is available practically the same amount of experience, of knowledge, and of ideas. The difference in our successes are not differences so much of mental capacity as of method and guidance. The importance, therefore, of examples for those just entering upon a business career and for those who are not making much headway after years of labor is quite apparent. From many points of view it may be truthfully said that the best service which a trade journal can render to men of business is to put at their disposal the successful plans and experiences of others. Theories are well enough in their way; but we can not learn much from them as theories. They become valuable only when we can present them in the living personalities.

With these motives in mind, it is a distinct advantage to set forth the main facts and characteristics of the career of Charles W. Lammers, ex-President. Ohio Hardware Association, Madisonville, Ohio. He has made a success in the hardware field through precisely the same means of closely studying the ideas and experiences of others as described in the foregoing sentences. In other words, he did not attempt to build a house without plans or to enlarge it without study.

Charles W. Lammers was born in Cincinnati, Ohio, January 26, 1875. Part of his education he received in his native city and the remainder in the Intermediate School of Madisonville, Ohio, a suburb of Cincinnati. Soon after leaving school, he entered the employ of his father, F. W. Lammers, who kept a hardware store in Madisonville. He worked faithfully for twelve years under his father's direction. That is to say, he worked mentally as well as physically. He studied salesmanship. He was constantly on the alert for new ideas in merchandising. He analyzed systems of cost finding. He gave close attention to advertising and window displays. He was always on the lookout for ways to gain the good will of customers and improve the friendly service of the store. When, therefore, at the end of the twelve years he became proprietor of the Charles W. Lammers Hardware Store in Madisonville, Ohio, he had already under control all the essential elements of success. From the very beginning, he learned the importance of friendliness and cooperation. Thus it was that he came to take a keen interest in the work of the Madisonville Welfare Association of which he was at one time the President. He is the past president of the Cincinnati Hardware Guild, as well as of the Ohio Hardware Association. He is a director of the Madisonville, Ohio, Building Association, the largest organization of its kind in the state of Ohio, and holds membership in the Chamber of Commerce of Cincinnati, the Automobile Club, and other organizations. He is a member of the Masonic Order. He is intensely interested in everything pertaining to farming life.

UP TO THE MINUTE NEWS SIFTINGS

The A. and J. Manufacturing Company will erect a plant 80x504 feet in Gadsden, Alabama, for the manufacture of stoves.

The Arlington Stove Company, Chattanooga, Tennessee, has been organized by C. C. Moore, J. D. Carlin, J. C. Lee, A. C. Carlin, and John B. Hyde, with $25,000 capital. The company will manufacture stoves and ranges.

GOVERNMENT IS MAKING TESTS OF COOKING AND HEATING DEVICES.

Tests of cooking and heating devices of all kinds are being made by the Pittsburgh station of the Bureau of Mines, Department of the Interior, in behalf of the United States Army. While these tests are to constitute a comprehensive survey of the fuels and fuel appliances for general army requirements, the results, which will eventually be made public, will be of value to all dealers and householders.

J. M. Goldman, engineer of tests of the army, in outlining the aims and purposes of the army in this endeavor, makes the following statement:

All manufacturers of such standard devices and appliances have been asked to submit their product for test, a special effort being made to secure the latest inventions that have been developed recently for burning fuel. The apparatus submitted for test for heating and cooking and special appliances for mobile field cooking are to be tested at the United States Bureau of Mines experiment station, Pittsburgh, Pennsylvania. Standard commercial devices for burning coal, oil, gas, electricity and solidified alcohol are being investigated with special emphasis as to the principles of combustion involved and economy of operation. For cooking and heating devices, with the exception perhaps of house heating coal fired boilers, there seems to be a virgin field for investigation of heat losses. A standard army range is used for comparative tests as to economy of operation against other coal burning devices for cooking. This range was designed by army engineers for burning various grades of bituminous coal.

Gas burning ranges, both light and heavy duty, for barracks, cantonments, officers' quarters and hospitals, together with the largest size gas fired bake ovens that can be secured, firing with both artificial and natural gas, are also subject to special investigation. In testing gas fired devices for cooking special study will be made as to construction, the properties of the gases, characteristics of different types of burner, thermostatic control of temperature and distribution of heat in the ovens, the comparative fuel consumption of the top plates and of the oven burners with the total resultant fuel consumption.

The insulation of ovens for gas stoves presents a possibility of development especially for control of oven temperature, economy of fuel, and general conditions attendant with use of gas cooking devices in hot weather.

The question of cooking with fuel oil in army camps did until recently present possibilities, but owing to the initial cost of installation of devices for burning oil, the high cost now prevalent for fuel oil, and general fire hazard, this question is now held in abeyance. The generation of gas from fuel oils from Mexican and Mid-Continental fuels for making gas for army posts along the Atlantic and Pacific Coasts and in some instances in the interior where the Mid-Continental oils can be secured, is now being investigated as to the various types of gas generator using these types of oil as basic fuel.

The leading manufacturers of electrical cooking and baking ovens have submitted appliances for test. Investigations will be made as to fuel consumption, characteristics of heating elements of the different stoves, and comparative studies of insulation. It is thought that the electric cooking devices present possibilities of many installations for army work inasmuch as a large majority of army posts have individual power plants for lighting. These power plants are on bank fires during the day and it is thought to operate these plants at a maximum capacity during the day for electric cooking where the total kilowatt load for cooking is within the rated kilowatt load of the plant.

The manufacturers of solidified alcohol have submitted their fuel for tests in cooking ranges, mobile and immobile field kitchens, and for portable food containers. The use of solidified alcohol by troops provides a smokeless, compact fuel, igniting instantly, of special value for troops in advance combative positions.

The survey is directed through the Engineering and Standardization Branch of the Purchase and Storage Division of the General Staff, by the General Supplies Branch of the Army which is under the Quartermaster General. The Purchase and Storage Division of the Army was organized as a central purchasing department of the General Staff during the war by Major-General George W. Goethals, the builder of the Panama Canal.

THE GOOD ARE IN THE MAJORITY.

Those who do wrong form a very small percentage of our citizenship, else the jails would outnumber the churches; and it is because of their wrong-doing that they stand out so prominently. It is true that human nature has its failings but the American people as a nation are honest law-abiding citizens.

THE WEEK'S HARDWARE RECORD

Of Interest to Manufacturer, Jobber and Retailer

AMERICAN ARTISAN AND HARDWARE RECORD is the only publication containing western hardware and metal prices corrected weekly. You will find these on pages 40 to 45 inclusive.

The William Krueger Company, hardware and furniture, has increased its capital stock from $100,000 to $150,000.

The Buchanan Lyon Company, hardware and implements, Campbellsville, Kentucky, has increased its capital stock from $50,000 to $75,000.

Roe Beers Company, hardware and implements, has been incorporated at El Paso, Texas, with a capital stock of $40,000 by W. G. Roe, Winton Roe, and C. A. Beers.

With a capital stock of $30,000, the Columbus Hardware and Furniture Company, Columbus, Indiana, has been incorporated by William A. Moon, John F. Warbritton, and Charles L. Goodbar.

GAINS GOOD WILL BY A SPIRIT OF COMMUNITY HELPFULNESS.

There is more than one way of advertising a hardware business. By identifying one's self with the interests of the community and by taking an active part in the promotion of civic betterment, the hardware dealer can gain the goodwill of the people. A notable example of this spirit of helpfulness is furnished in the case of Hamp Williams, hardware man of Hot Springs, Arkansas. Not long ago he wrote an article for publication in one of the newspapers of his city in which he called attention to the many natural and social advantages of the town, but said not a word about his own business.

He received many telephone messages and personal compliments, together with postcards and letters thanking him for the article. One card, for example, had this message: "Good morning, Mr. Williams. Thought I would just have to reach out over the house-tops and shake hands with the perennial booster. Am glad some people really apprecite the divine handiwork in this beautiful Valley of Vapors. 'Don't know you.' Oh, I am your friends."

EXPLOIT THE BASEBALL SEASON.

The opening of the baseball season should be looked forward to and special window displays arranged. A rather simple one though with its effect, is to clear out a rather large window and cover the floor with plain white paper and in the center place a ball, a bat and a glove. One or two attractive cards could be placed on the edge in the back. Many other ideas will suggest themselves which can be made to have a local interest. Do not overlook the school boy teams. Appeal to them.

ENLARGES PLANT TO TAKE CARE OF ITS INCREASING BUSINESS.

The growing popularity of the products of the Bemis and Call Hardware and Tool Company, Springfield, Massachusetts, makers of wrenches, has resulted in such a steady volume of orders that it has become necessary to increase the Company's manufacturing facilities. Consequently, important extensions of the present equipment are being made. A four-story brick structure, 100x60 feet, is being added to the factory; and another building, 50 feet wide by 220 feet long, is also under construction. These improvements are made possible only by the maintenance of an enlightened policy of sound workmanship, adequate service, and uniformly satisfactory quality.

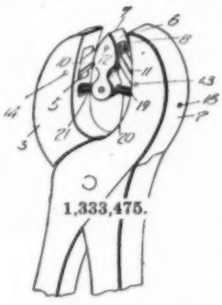
OBTAINS TRADE-MARK REGISTRATION.

United States Patent Office registration has been granted to Henry Disston and Sons, Incorporated, Philadelphia, Pennsylvania, under number 123,922, for the trade-mark shown in the accompanying illustration. The particular description of goods is magneto files and tools for cleaning spark plugs. The company claims a use for this trade-mark since June, 1919. The claim was filed October 18, 1919.

123,922.
KLEEN SPARK

SCREW BOLT PLIERS ARE PATENTED.

Under number 1,333,475, United States patent rights have been granted to Spencer Allas Dorsay, St. Catharines, Ontario, Canada, for screw bolt pliers described herewith:



The combination with a pair of plier jaws, of a work-engaging member supported by said jaws and movable therewith into engagement with the work, the said member serving to prevent slipping of the jaws relative to the work during operation of the tool.

There is little sense in attacking all profit and consigning the entire system to the junk heap. Unjust and criminal practices must be exposed and punished. But proper profits are a great social gain, because they furnish a powerful stimulus to production of the very best kind.

EXHIBITS IN AMERICAN ARTISAN WINDOW DISPLAY CONTEST

WINDOW EXHIBIT OF ALUMINUM WARE MAKES EFFECTIVE USE OF ADVERTISING POSTERS.

If words uttered by the human voice could be kept in constant repetition as easily and persuasively as words printed on advertising posters, there would still be strong reasons for making use of the advertising posters in window exhibits. Less effort is required to receive impression through the eye than through the ear. The imagination responds more quickly to illustrations than to verbal descriptions. Hence, the power of a window display in which commodities are shown with cut-outs and posters illustrating their use is much more effective than that of a window exhibit in which only the goods themselves are presented to the attention of the passer-by.

The window exhibit of aluminum ware arranged by A. J. Mohr, Chambersburg, Pennsylvania, depicted in the accompanying illustration, was awarded Honorable Mention in American Artisan and Hardware Record Window Display Competition because of the effective use made of advertising posters. This exhibit is bright and attractive. It arrests atten-

Window Display of Aluminum Ware, Awarded Honorable Mention in AMERICAN ARTISAN AND HARDWARE RECORD Window Display Competition. Arranged by A. J. Mohr, Chambersburg, Pennsylvania.

tion. Even a person preoccupied with matters of pressing importance could not fail to notice the display if he chanced to pass the window. The arrangement of the aluminum ware is well designed both as to symmetry and practical usefulness.

According to the description which accompanied the photograph of this window display, the roof of the booth is made of straw packing taken from the sides of a box which came from Japan. The columns are of tin with birch bark paper background. The diamond-shaped decorative designs are from hand-cut stencils and put on with stove polish. All the large signs and letters are of red cut-out on crêpe paper. The figure of the woman in the booth is a cut-out to which a white apron is attached. The porch fence is a frame slotted to hold cardboard cut-outs. The floor is covered with imitation grass made of paper. Special attention was bestowed upon the lighting effects so that the display was bright without being dazzling. It seems scarcely necessary to add that a large volume of sales resulted from this window exhibit.

GUARANTEES EVERY FILE IT MAKES.

Every file and rasp produced by the Nicholson File Company, Providence, Rhode Island, is guaranteed. Even with its constantly growing means of production, the demand for its files is steadily increasing, declares this company. Nothing can better commend the high quality of its products than the augmenting list of satisfied users of the Nicholson make of files. Praise has been uttered in all parts of the world, states the manufacturer, attesting to the unusual grade of steel, temper, cut, durability, and uniformity of its files and rasps. Illustrated herewith is one of the numerous kinds of files made by this company. This file has met with the approval of machinists and mechanics doing varied work. The steel entering into its manufacture is selected by the guidance of years of experience and scientific knowledge of the durability, temper, etc., of the metal. All the files produced by the Nicholson File Company are of a uniform make and can be relied upon to do the work they are expressly made for with satisfaction and precision. In economizing in the wear of files intended for general purposes, consideration should be given to the kind of use to which they may be subjected in the different stages of their use. It is often penny wise and pound foolish to use a single file for many purposes. The best satisfaction will be gained and the most amount of service in return for the money expended if a file made for the particular work is used. The Nicholson File Company manufactures a file and rasp for almost every conceivable need for which a file is required. And because of the special construction of the file made by this company for a particular task it will better do the work and outlast a file not so adapted. Details and prices on any make of file or rasp can be obtained from the Nicholson File Company, Providence, Rhode Island

Hand File Made by the Nicholson File Company, Providence, Rhode Island.

HELP LESSEN SHORTAGE OF HOUSES.

The housing problem is one of the great issues of the day. All unnecessary construction was forbidden during the war, and now that the restrictions have been withdrawn the high prices of materials and labor and industrial troubles have tended to reduce the amount of building. In many industrial centers newcomers are unable to get houses to live in, rents have gone up, and the situation has become so serious that state and municipal commissions are seeking a solution.

Why not stop burning up the existing buildings, if there are not enough to go around and more can not be built under existing conditions? Thousands of homes are burned each month, most of them through carelessness. If housing is so important, if homes are so hard to find, why not be careful with those that we have? Apply fire prevention methods. Be careful about matches, smoking, lighting and heating apparatus and gasolene. Clear out the rubbish, inspect the flues, watch the shingle roofs. Conservation is the order of the day, and if the shortage of dwellings will cause householders to be careful about the fire hazards of their homes one avoidable cause of that shortage will be greatly reduced.

FOLDING CAMP COOKING GRATE IS A SERVICEABLE DEVICE.

The alert hardware dealer makes special efforts to get the trade of people who go camping in the Spring and Summer. It is surprising what a variety of things carried in hardware stock are used for such outings. The hardware merchant is the logical source of supply for practically everything required for camping. It will pay him, therefore to investigate the merits of the Union Folding Camp Grid which is made by the Union Steel Products Company, Limited, Albion, Michigan. The advantages of this simple device are apparent almost at a glance. The accompanying illustration shows how simple it is. It can be used anywhere. It requires no special base and can be stuck into the ground and a fire started under it without trouble. When folded, it is compact and light in weight. Being strongly constructed of durable material, it will stand hard usage. Hardware dealers should write for full particulars concerning this and other profitable articles to Union Steel Products Company, Limited, Albion, Michigan.

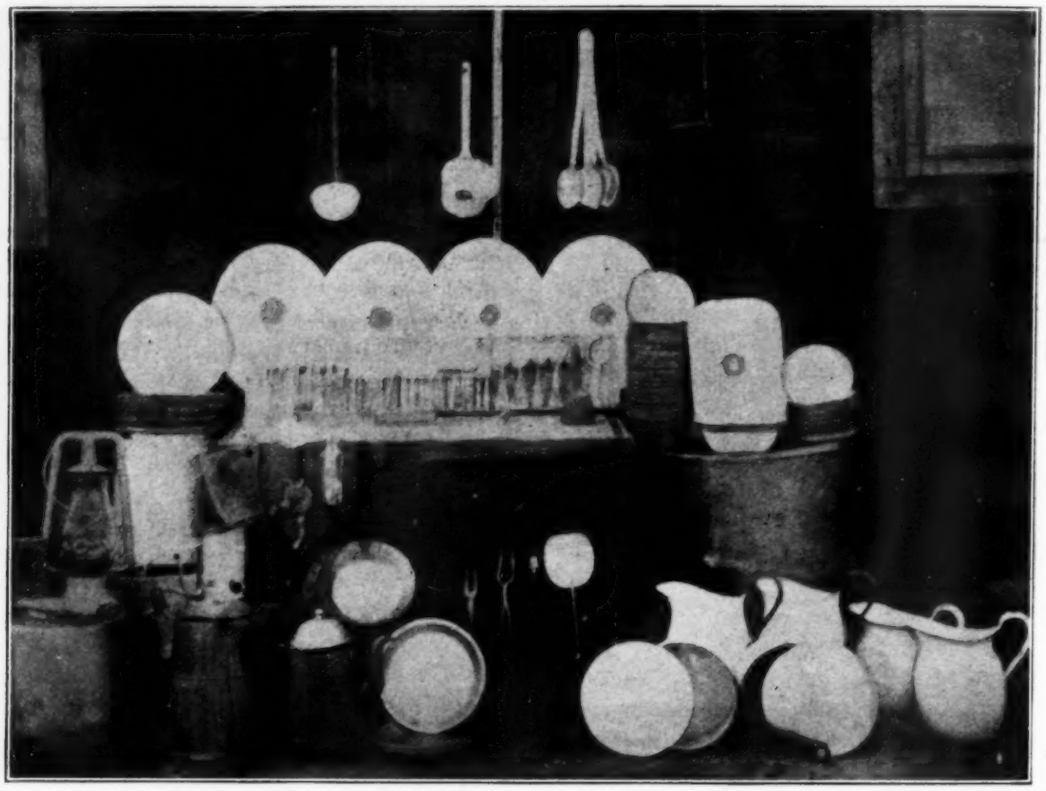
Union Folding Camp Grid, Made by Union Steel Products Company, Albion, Michigan.

INVEST SAVINGS IN GOOD SECURITY.

The man on the merry-go-round may ride fast but he don't get far. To travel in the straight line of progress, save first, save steadily, and buy War Savings Stamps and other Government securities—"Backed by the Nation's strength."

RED CROSS DISTRIBUTES AMERICAN KITCHEN UTENSILS IN FRANCE AND BELGIUM.

In the little patched up kitchen whose original roof and one side wall had been torn away many months past by a Boche shell, stood a bent and worn looking French peasant woman. Her face was furrowed with lines of care, but the kindly dark eyes told of a disposition unsoured by trouble and sorrow. Awkwardly, with gnarled, stiff old fingers, she was turning the handle of an ordinary American flour sifter, whose brightness and shininess displayed its extreme newness.



Photograph of the Kitchen Set Which the American Red Cross Is Distributing to Refugees in France and Belgium. Photo Supplied by American Red Cross.

Upon the roughly made table and against the wall were rows of other kitchen utensils, of unmistakable American make and of a newness most evident.

Old Jeanne was a grandmother, who had come back to the little shell-torn village which once was her home, accompanied by her one remaining son, and his wife and children. Jeanne was the homekeeper while the younger people worked in the fields, trying to wrest their livelihood from the soil.

At last, with an "oh, la, la," of disgust she turned to the little black aproned two-year-old who was playing in a corner of the kitchen with—

"Here, mon petit chou-chou, is a new plaything for you. It won't sift flour but it will make you a nice toy, mon cheri." And she gave into the eager hands of the little boy the shining new flour sifter.

For generations past Jeanne's mother and grandmother before her had sifted their flour with a dexterous twist of their wrists, through a horsehair covered wooden hoop. Jeanne could not believe that a sifter with a handle was simpler or quicker in its results than this old method of her ancestors. But as the days went by she began to realize that there was no means of spiriting back the old-time sifter that had gone the way of destruction in the war. Yet if bread was to be light the flour must be sifted, so one day the little grandson was deprived of his new toy and the American sifter found its way back to the kitchen shelf. Now Jeanne had become quite accustomed to this queer contrivance and she begins to see the advantages of modern methods of flour sifting over her own more primitive way.

Although the time honored rolling pin, flour sifter, and other kitchen equipment are known in France as a "battery," they are just as welcome by any other name to the clamoring housewife who is weeping over the loss of her age-old copper pots and pans.

To each of these housewives who is helping to rebuild a home in the war-devastated regions of France and Belgium, the American Red Cross is giving a complete set of cooking utensils. Thousands of refugee families have already been supplied with these "kitchen batteries."

The younger housekeeper adapts herself more readily to this American hardware than those of the older generation. The French bride who has received as one of her most prized wedding gifts a full "kitchen shower," is firm in her belief that everything new under the sun comes from America. The trick brooms, odd shaped coffee pots, metal dishwashers, patent egg beaters and light-weight dishpans are certain to win her praises. Happy is the French matron who can display as gifts from the American Red Cross these useful articles which make her feel herself a self-respecting housekeeper again after years of deprivation.

SCHWAB SAYS YOU CAN NOT HAVE A GOOD TIME AND BE SUCCESSFUL.

"You can have a good time in life or you can have a successful life, but you can't have both," declared Charles M. Schwab, the great steel manufacturer in a recent address to the students of Princeton University, Princeton, New Jersey. "You have got to make up your mind at the start which of the two you are going to have," he continued. "There is no royal road to a successful life, as there is no royal road to learning. It has got to be hard knocks, morning, noon and night, and fixity of purpose. Never has there been a time in the history of the world when so much opportunity offers for the leading of a successful life as today.

"I don't say you shall become manufacturers or business men or professional men. But this I do know: That any man who goes into anything in life and does it better than the average will have a successful life. If he does it worse than the average his life will not be successful. And no business can exist in which success can not be won on that basis. If he did exist and nobody could make a proper success or get a proper return from it in life, the business would tend to go out until it would reach a basis on which it could be profitable.

"Another important thing is loyalty. What little success I may have won in life I attribute to the loyalty I had for a dear old friend who was my first steel master, whom you perhaps have never heard of, Captain Bill Jones.

"Captain Jones was a great mechanic, just a natural genius at mechanical things. No education at all. He knew nothing of engineering or chemistry or the sciences. Now, I was thrown in, fortunately, with him. I made up my mind that I could be very useful to that man by learning things that he could not learn, and above all by being loyal to him and never letting the world know that the things for which he received credit were not his own creation. Boys, did you ever stop to think that a great man in life who has won great acclaim and great reputation is the very man who is willing to share and give the honor to others in the doing of the things that made him great? The man that will selfishly stand alone and proclaim that he is the man who has done these things never is the man who really did them. My own experience is that there is no real effort in life that is not done better under encouragement and approval of your fellow man. A man goes along then with greater confidence. You must learn to let others share with you in that which you are doing, and honor and credit will be reflected upon you for so doing.

"Marshal Foch, the great commander, said to me a short time ago, when I congratulated him upon the wonderful work of the war: 'This great military staff is like an orchestra, and each one fills his place. Each is equally important in the functioning of the whole. If the baton is in my hands it is merely a matter of chance, but we shall see to it that each man in this staff gets recognition for that which is due.'

"In the management of my great enterprises I have yet to ever find fault with any man. If a man is of the character that you must find fault with him to get the best out of him he is not a man to be desired in an organization. Show me the man that will do his best under approval and I will show you the man that has within him the elements for successful going ahead.

"Now, to come back to loyalty. Be loyal to the people with whom you associate at the start. When this good Captain Jones same to the end of his life's work do you not suppose it was worth more to me than anything else to have him say: 'That is the man that helped me do these things'? Remember always that it will but attract attention and credit to yourself to share with those who help you. Be loyal when you start life, boys, wherever you start. Make your employer feel truthfully that you are sincere with him; that you are going to promote his interests; that you are going to stand for the things which he represents; that you are proud of being a member of his staff, and there is nothing that will reap you a richer reward. Loyalty above all!

"Be friends with everybody. When you have friends you will know there is somebody who will stand by you. You know the old saying that if you have a single enemy you will find him everywhere. It doesn't pay to make enemies. Lead the life that will make you kindly and friendly to every one about you, and you will be surprised at what a happy life you will live.

"You boys will all, of course, have to start to work upon a salary. But the quicker you get out of working for a salary the better for all concerned.

"I don't care how much a man earns. The more he earns the better I like him. And I pay, in what I call bonuses to the various superintendents and managers of the different establishments, more money for their successful management than I pay the stockholders of the concern in dividends. And it will surprise you to know the great sums of money that some of these men make. I would be afraid to tell you for fear of discouraging you in your start in life.

"Now, I do the same with the working people. I say that a good workman is entitled to more pay than a poor workman. And, therefore, wherever it is possible, we have our workmen paid for the amount of work they do. I know that is contrary to the general rules of trade unionism, etc., but it is the proper economic basis that a man shall be paid for the work he does and proportionately to the work that he does.

"Just one thing more. Go at your work. You may not find yourself the first year. You may start at work that you think will not be agreeable to you. Do not hesitate to change. If you find that it is not according to your tastes and ultimate ambitions, then change and go into something that is more pleasant. No man can be successful at work if he doesn't find the work he has to do pleasant. No man can ever do a thing well that he is not interested in. You boys will find in your classes that you do best in the things you like to do. When you start in life if you find you are wrongly placed don't hesitate to change, but don't change because troubles come up and difficulties arise. You must meet and overcome and conquer

them. And in meeting and overcoming and conquering them you will make yourself stronger for the future."

EXPLAINS HOW TO MAKE SALES BRING SATISFACTORY RESULTS.

Selling is a waste of energy if it does not bring satisfactory profits. How to make sales productive of dollars and cents over and above expenses is lucidly told by Frank Stockdale in one of his lectures on the problems of retail merchandising.

"I have found a great many stores," says Mr. Stockdale, "that are selling plenty of merchandise, wonderful stores in beauty and service, they are doing a good business, but they fail to come across with the thing most to be desired by a retail merchant—profit.

"Most figure facts do not earn profits. Ninety per cent of the figure facts in stores represented here do not earn profits. Some of you think you have splendid systems of accounting, but your systems only protect profits, they do not make profits. There is a difference between the night watchman and the man who works in the store, and there is a difference in the figure facts—records that protect profits and records that earn profits.

"Figures in connection with a business are very undesirable unless they tell the truth, the whole truth and nothing but the truth. A lot of men are misguided in figures. There are a lot of people using figures who conducted matters just as profitably before they got records into their business. They are misled by their figures. Some men's intuition, sense of management and sense of a movement of things has been a better guide than the figures they had. Incomplete figures will lead a man far astray, and the only way to talk intelligently about profits is by using figures.

"I know a store that ran along for four or five years making a nice profit for the owner. The sixth year they bought heavily for increased business, but they lost in the sixth year all they had made in the other five simply because they had been letting the business run along and the old goods were collecting all the time. When the crash came their profits went up in smoke. There are a lot of people in business who are in business because they are good salesmen and not because they are good managers. I have seen numerous cases where a man working for another man has become the star salesman. He decides he is the best salesman and starts out to run a business of his own. If he stops at salesmanship he is almost doomed to failure, because there is more to business today than being able to bring the mind of the customer to your way of thinking about merchandise. That is one of the absolutely essential things, but I have also known a lot of men to sell and not make any money. The management of the successful store must be based very largely on figures. There are certain things figures will do for a store. There is one class of people that complain more about competition than any other, they are the guessers. And the main reason they are complaining is because their competitors know a few things they don't know and among the things their competitors know are these: 'What lines are profit makers,' 'What lines are profit chokers,'—these two lines are found in almost every store. 'What their constant expenses are,' 'How much it costs them to sell goods.'

"There are two things a man does in the retail business, he carries goods and he sells goods. There is a distinction. I might fill the room with goods and not sell them, but that begins to cost money right away. And I might sell goods without carrying goods. Some people can sell goods without carrying them and some people carry them without selling.

"Other things the man who is up with his business knows are 'How much money is invested in stock.' 'Are stocks increasing faster than sales.' 'How many bills he has to pay,' 'Whether collections are keeping up with charges,' 'Progress and condition of the business.'

"Lots of figures don't tell us whether we have been going forward or backward. That kind of record won't do a man much good. You have to know these facts sometimes, and the sooner the better.

" 'Don't forget markdowns.' That should be taken into consideration when you mark your merchandise. The merchant wants to look ahead and make provision for the thing that in most cases is inevitable and know what his losses will be.

" 'Expenses forgotten are usually profits lost.' I have known men who tack on a little percentage for 'incidentals' before adding their percentage of net profit. This indicates that the merchant knows there are mistakes.

" 'Rent and real estate.' 'Interest on capital invested in stock, fixtures, etc.—open accounts, outstanding accounts and money invested in working capital.' 'Salary for self and members of the family.' 'Depreciation on goods and equipment.' These are other items that must be considered.

"Depreciation varies and there is no reason for taking any definite percentage. If there is anything in records it is to tell us the truth, so merchants should be honest with themselves when they go to depreciate. Let the statements tell you the truth for some goods depreciate faster at one end than the other.

"A clear understanding of the fundamental difference between margin and profit is necessary. One of the keenest merchants I have met told me he would like someone to write an article on 'margin of profit vs. margin for profit.' What he said was he would like for someone to write an article on 'an opportunity for profit, and actually getting the profit.' Margin is the opportunity for profit and also an opportunity for loss. Margin itself does not spell profit.

SPECIAL SALES NEED PREPARATION IN ORDER TO GET THE MOST POSSIBLE OUT OF THEM.

Practically all hardware dealers conduct special sales. They are desirable in many instances. For the clearing out of old stock, a better method has not been devised. Besides the immediate purpose of disposing of certain goods, the special sale can be made

to further the hardware merchant's regular business. Though dealers frequently make use of special sales, few know how to avail themselves of the best methods. There are rules, not necessarily iron bound, which, if followed with discression, will increase the value of special sales.

Display the goods you have selected for the purpose, using large price cards. Have a large number of red or yellow tags, printed on both sides. State the nature of your sale on these cards.

Some time before the sale, it is well to start sending announcement cards out by men, not boys, and have them hung at cross-roads points and on bushes along the roads, for a radius of 15 miles, or to a point within a mile or so of every adjoining town, or even beyond is good. Thoroughness will be repaid in ventures of this kind.

The size of the circular should be governed by the breadth of the special sale. See that nothing is priced on the circular that is not a genuine bargain that will make people sit up and take notice. You can use large cuts and a few prices and descriptions if your special offerings are limited. Display in your show windows for a few days a very special bargain that is to go on sale at certain date at a certain price. Reserve nothing nor sell nothing at the special prices before that date, but accept telephone orders on that date. Urge people who buy to take their goods at once.

Do not think that because you have made the mechanical arrangements for the sale you can afford to sit back and twiddle your thumbs. Throughout the entire time your services and attention are necessary. Get into the midst of the fray and make things move. Speak to as many customers as is possible. Be conspicuous. Get enthusiastic over the sale yourself if you expect the people to become so. It will work if carried out properly. Hundreds who have seen it work will testify to the verity of this statement. If you do not disappoint the people, it will work. You must live up to your claims. You must give value for value. Remember, it is not only the immediate disposal of a quantity of goods you are working for, but the spreading widely of the quality of your service and goods.

FUSSY PERSONS ARE TALKATIVE.

The restful person never talks too much. Sisters who would learn the art of living without wearing other people out, should remember this. And brothers too, for the sex that has the reputation for superfluous talking doesn't do all of it. Masculine bores are about as numerous as feminine chatterboxes.

A loud, high-keyed or rasping voice renders the talkative person doubly unbearable. The egotist, the person who always wants to be "it" and belittles the attainments and the achievements of others, is almost sure to be loquacious and tiresome.

OBITUARY.

Frederick Pease.

After several months of painful illness, borne with uncomplaining, Spartanlike patience, Frederick Pease of the Charles Parker Company, Meriden, Connecticut, passed away March 19, 1920, at the Winthrop hotel in that city. He was born September 10, 1856, in East Windsor, Connecticut, and moved to Meriden, Connecticut, with his parents when he was 14 years old. For a time he worked as clerk in a dry goods store. Later he conducted a retail shoe store until May, 1882, when he entered the employ of the Charles Parker Company, Meriden, Connecticut. He became salesman and confidential man for that Company and by his geniality and cleverness won numerous friends throughout the hardware trade during the thirty-eight years of his connection with the Charles Parker Company.

October 18, 1892, he married Miss Harriett E. Johnson of Meriden, Connecticut, and lived happily with her until three years ago when, to his great grief, she died.

Mr. Pease was both a Knight Templar, a Thirty-Second degree Mason and a noble of the Mystic Shrine. His Masonic affiliations were with Center Lodge, A. F. & A. M.; Keystone Chapter, R. A. M.;

Hamilton Council, R. & S. M., and St. Elmo Commandery, Knights Templar, of Meriden, Connecticut; E. G. Stoer Lodge of Perfection, Elm City Council, Princes of Jerusalem, and New Haven Chapter, Rose Croix of New Haven, Connecticut, and Lafayette Consistory and Pyramid Temple of Bridgeport, Connecticut.

Funeral services were held Sunday, March 21, 1920, at the Winthrop hotel. The Reverend Henry B. Taylor, pastor of St. Paul's Universalist Church, Meriden, Connecticut, officiated. The honorary pallbearers were W. C. Comstock, W. F. Parker, James F. McAdams, Eli C. Birdsey, W. H. Lyon, Francis Atwater, William F. Handel, and Herman Hess. In fulfillment of his dying request, the body was taken to Springfield, Massachusetts, and there cremated.

Mr. Pease did not leave any family, as he had no children. He is survived, however, by three sisters, namely, Miss Emma S. Pease, Mrs. S. M. Camp of Meriden, Connecticut, and Mrs. Levi Drake of Hartford, Connecticut.

PRESENTED BY BUREAU OF FOREIGN AND DOMESTIC COMMERCE.

The Bureau of Foreign and Domestic Commerce, through its Special Agents, Consular Officers and Commercial Attachés, is receiving information of opportunities to sell hardware and kindred lines in several foreign countries. Names and locations will be supplied on request to the Bureau in Washington or its District Offices. Such requests should be made on separate sheets for each opportunity, stating the number as given herewith:

32349.—A firm of importers in Syria desires to be placed in communication with exporters of hardware, enamelware, copper, tin, inc, shotguns, sporting goods, etc.

32353.—The representative in England of an American firm desires to secure further representatives of American manufacturers.

32355.—A firm of commission agents in Argentina is interested in securing agencies for manufacturers of farm implements, hardware, etc. Correspondence should be in Spanish. References.

32357.—A manufacturing company in France desires to purchase first-quality tin plates for the manufacture of tin cans for sardines and best quality of preserves. The plates must be perfectly tinned, and the wasters must not be in a proportion of over 10 per cent. Quotations should be given c. i. f. French port. Payment, cash against documents. Correspondence should be in French. Reference.

32358.—A general importer in Syria desires to be placed in communication with exporters of hardware, saws, agricultural fachinery, kitchen utensils, hand tools, etc.

32360.—A manufacturer in France desires to purchase first-quality tin plates of a thickness of twenty one-hundredths millimeter to thirty one-hundredths millimeter for the manufacture of tin cans for sardines and for preserves. Quotations should be given c. i. f. French port. Terms, cash upon receipt of products. References.

32363.—A sales agency firm in Indiana desires to secure the sole representation of manufacturers for the sale throughout India of hardware, etc. Samples, catalogues and terms are requested. References.

32370.—A manufacturer in Indiana desires to secure an agency for the sale of hardware. Quotations should be given c. i. f. Madras or Cocanada. Payment, cash against documents. References.

32371.—The French representative of an American firm is in the United States and desires to purchase and secure an agency for the sale in France of agricultural implements, hardware, iron and steel goods, and other articles needed in that country. References.

32372.—A company in India desires to be placed in direct touch with merchants and manufacturers of hardware and general sundries. Reference.

32373.—An agency is desired by a commercial agent in Spain for the sale of tin plate. Quotations should be given c. i. f. Spanish ports. Correspondence may be in English. References.

32376.—A merchant in Italy desires to secure an agency on a commission basis for the sale of hardware, automobile accessories, metals and manufactured goods in general. Correspondence may be in English. Reference.

32381.—Merchants in Mesopotamia desire to purchase copper sheets, galvanied iron, nails, hardware, lanterns, etc. Terms, 20 per cent in advance with order, balance on receipt of documents. References.

32382.—An American trading company which is about to send a representative to Europe desires to be placed in communication with firms with a view to securing agencies for the sale of American goods. References.

32386.—A firm of importers in Syria desires to make connections with firm for the sale of hardware, iron and steel ware and utensils, tools, etc.

COMING CONVENTIONS.

Illinois Sheet Metal Contractors' Association, Bloomington, Illinois, April 14 and 15, 1920. Frank I. Eynatten, Secretary, Peoria, Illinois.

National Warm Air Heating and Ventilating Association, Cleveland Hotel, Cleveland, Ohio, April 21, 1920. Allen Williams, Secretary, Columbia Building, Columbus, Ohio.

Southeastern Retail Hardware and Implement Association, embracing Alabama, Florida, Tennessee and Georgia State Retail Hardware Associations, Atlanta, Georgia, May 4, 5, 6, and 7, 1920. Walter Harlan, Secretary, 701 Grand Theater Building, Atlanta Georgia.

Louisiana Retail Hardware and Implement Association, Alexandria, Louisiana, May 10 and 11, 1920. R. D. Nibert, Secretary-Treasurer, Bunkie, Louisiana.

Stove Founders' National Defense Association, Boston, Massachusetts, May 11, 1920. R. W. Sloan, Secretary, 826 Connell Building, Scranton, Pennsylvania.

Hardware Association of the Carolinas, Imperial Hotel, Greenville, South Carolina, May 11, 12, 13, and 14, 1920. T. W. Dixon, Secretary, Charlotte, North Carolina.

Southern Hardware Jobbers' Association, Marlborough-Blenheim Hotel, Atlantic City, New Jersey, May 11, 12, 13, and 14, 1920. John Donnan, Secretary, Richmond, Virginia.

American Hardware Manufacturers' Association, Marlborough-Blenheim Hotel, Atlantic City, New Jersey, May 11, 12, 13, and 14, 1920. F. D. Mitchell, Secretary, 4106 Woolworth Building, New York City.

Old Guard Southern Hardware Salesmen's Association, Marlborough-Blenheim Hotel, Atlantic City, New Jersey, May 12, 1920. R. P. Boyd, Secretary, Knoxville, Tennessee.

National Association of Stove Manufacturers, Boston, Massachusetts, May 12 and 13, 1920. Robert S. Wood, Secretary, National State Bank Building, Troy, New York.

Metal Branch National Hardware Association of the United States, Hotel Cleveland, Cleveland, Ohio, May 21 and 22, 1920. W. H. Donlevy, Chairman Metal Committee, 1012-1014 Cherry Street, Philadelphia, Pennsylvania.

National Association of Sheet Metal Contractors, Peoria, Illinois, June 8, 9 and 10, 1920. Edwin L. Seabrook, Secretary, 261 South Fourth Street, Philadelphia, Pennsylvania.

Ohio State Sheet Contractors' Association, Toledo, Ohio, July 20, 21, and 22, 1920. W. J. Kaiser, Secretary, Columbus, Ohio.

RETAIL HARDWARE DOINGS.

New Mexico.

The Barry Hardware Company of Clovis will open a similar business in Melrose.

Kansas.

The Kenney and Blumenthal Hardware Company has purchased the stock of the Wakefield Hardware Company and has opened a hardware store in Junction City.

John Rosenquist has bought the Malapert building in Osage City and will put in a first class stock of hardware.

Arkansas.

The Beasley Hardware Company at Stamps has increased its capital from $10,000 to $25,000.

Iowa.

B. E. Finde has been succeeded in his hardware business at Ferguson by O. A. Finder at Magnolia.

Cox and Lough have opened a hardware business at Ferguson.

Kansas.

The Costa Hardware Company at Anthony has leased additional space for an implement store.

The Wetson Hardware Company are erecting a new building at Garnett.

J. E. Brodmarkle has sold his hardware business at Lebanon to Albert Ward.

Minnesota.

Milton Berglund has bought a lot at Hope on which he will erect a building and conduct a hardware store.

The hardware business of John Junga at Mountain Lake has been burned out.

Thomas and Padett have sold their hardware store at Park Rapids to William Haight.

Missouri.

Campbell and Mayer, hardware dealers, have been succeeded at Lexington by Raymond Mayer, who will continue the business under the name Mayer Hardware Company.

Scarcliff and Doty have sold their hardware and implement store at Warrensburg to I. A. Roberts and Son.

Nebraska.

C. G. Musselman, hardware dealer of Fullerton, will open a branch store at Geneva.

I. T. Ward has sold his hardware store at Gibbon to Adolph Schmidt.

I. F. Ward and Sons have sold their hardware business at Kennard to B. O. Fairfield.

Texas.

The Stone Hardware Company at Panhandle has been incorporated with a capital of $20,000. The incorporators are: D. C. Stone, Jr.; E. H. Hill, and Bess L. Rorex.

Wisconsin.

Marriott Hardware Company at Baraboo has increased its capital from $15,000 to $25,000.

C. L. Smith has opened a hardware store at Jefferson.

I. H. Baillies and Charles Smith have purchased a hardware store at Lodi.

C. C. Kelleher is closing out his grocery business and will conduct a hardware store at Phillips.

J. A. Pennington has sold out to T. A. Horton, who has opened a dry goods, shoes, and hardware business at Watersmeet.

ADVERTISING CRITICISM AND COMMENT

Helpful Hints for the Advertisement Writer

Plainness is the main characteristic of the advertisement of Phil. Emrich, 824 Main Street, Cincinnati, Ohio, reproduced herewith from the *Cincinnati Enquirer,* Cincinnati, Ohio. It is clear that the nature of the announcement is unmistakable. The two small

illustrations are well placed and add to the meaning of the text. They give vivid meaning to the subject matter. Service is the main quality being advertised. Hence the placing of the name at the top of the page in bold face type is in conformity with intent of the advertisement. Merely stating that the advertiser is a *manufacturer of shears and cutlery* is not enough to create a desire to purchase from him. Some qualifying remarks would be advantageous. In other respects the space is employed favorably.

* * *

Sales are conducted by even the most reputable retail stores in the country. And most of the retail advertisements appearing in the daily papers announce sales of some kind or other. When writing copy for

this sort of merchandising, the advertiser can use more space and cover a wider range of goods than would be ordinarily permissible. What is most particularly desirable to be expressed is the relative cheapness of the articles on sale. Hence this copy at the start has more interest in it than the usual announcement of the stocking of a certain line of goods. An example of well-proportioned copy announcing a sale is shown herewith written by the United Hardware and Tool Company, Incorporated, 306 Prospect Avenue, Cleveland, Ohio, reproduced from the *Cleveland Press,* Cleveland, Ohio. To wander away from the main point of the subject, it would be informative to say that this advertiser realizes the advantage of conducting a sale on a single line of goods. The heading of this advertisement is to the mark and contrasts well with the rest of the advertisement. Of course, statement of prices can not be done away with in the announcements of a sale. It is the prime essential. The subject matter of this copy is meaningful throughout and the illustrations are placed in the proper order. However, the apearance of the picture of the bell transformer can be called a slight blemish on what might otherwise be an example of an advertisement announcing a sale worthy of exact copying in form.

* * *

Advertising standard trade-marks is a good method of acquaintaing the community with the reliability of the stock of the hardware dealer who carries on such pubilicity. In this instance the advertiser, the White Hardware Company, Savannah, Georgia, in its advertisement appearing in the *Savannah Press,* reproduced herewith, embodies in his copy only the names of a standard make of ammunition. Usually, sportsmen know the merits of the various makes of shells manufactured. Should they desire a certain grade, the merchant handling that particular kind will get their business. Evidently, the White Hardware Company seeks nothing more by means of this advertisement than to sell the shells it names. Unity in almost everything is desirable. One thing at a time is a good rule. A retailer can not expect to advertise his entire stock in one insertion. Neither can he crowd his items and do full justice to any of them. Take one thing or several related things and concentrate your advertising on them until you have gained the desired results.

Use the
BLACK SHELL
AJAX
CLIMAX
ROMAX
There are none so good.
White Hardware Co.
25 Congress St. W.

* * *

"That which blossoms in the spring will bring forth fruit in the autumn." The advertisement which blossoms today brings forth fruit tomorrow.

HEATING AND VENTILATING

GIVES TEXT OF THE MICHIGAN LAW GOVERNING THE INSTALLATION OF WARM AIR HEATERS.

Interest in the Michigan law regulating the installation of warm air heating plants has been revived by the amendments to the law suggested by the Ninth Annual Convention of the Michigan Sheet Metal Contractors' Association, held March 2, 3, and 4, 1920, in Saginaw, Michigan, a detailed and complete account of which was given on pages 43 to 49 in the March 6, 1920, issue of AMERICAN ARTISAN AND HARDWARE RECORD. The text of the Michigan law as it now stands is as follows:

Michigan Bill to Regulate the Installation of Warm Air Heating Plants.

A Bill to regulate and control the installation of warm air heating plants, and to provide for the public safety and fire protection in such installations.

The following is the Substitute which was reported out by the State Affairs Committee and was passed by the Senate and House of Representatives without a dissenting vote. It is now up to the Governor for his signature.

The People of the State of Michigan enact:

Section 1. Warm air heating plants to which this act refers, consist of one or more furnaces enclosed in galvanized sheet iron, and does not include the pipeless furnace or one register furnace.

Section 2. Before proceeding with the installation of any warm air heating plant in cities or villages within the State of Michigan, wherein provisions for building inspection exist, a permit therefor shall be obtained by the heating contractor or owner from the department of building inspection, under whose jurisdiction the said plant is to be installed. The fee for such permit shall be one dollar which shall be paid by the person applying for such permit to the said department of building inspection, and all money so received shall be credited to the general fund of such city or village.

Section 3. Immediately following the completion of the installation of a warm air heating plant for which the necessary permit has been issued, the heating contractor or owner shall, in writing, so notify the aforesaid department of inspection, whereupon said department shall, immediately following the receipt of aforesaid notice, cause the same to be carefully inspected, and unless complaint of violation is made within ten days the said installation will be deemed approved and favorably passed upon.

Section 4. No warm air heating plant shall be installed in any building for occupancy or residential purposes, unless the said warm air heating plant shall have free air space of at least fifteen per cent greater than the cross-sectional area of all warm air pipes taken from the bonnet of the casing, and shall be of such guaranteed capacity and construction as to provide for the maintenance of seventy degrees Fahrenheit in parlors, libraries, main halls, living rooms, dining rooms and bath rooms, and a temperature of sixty-five degrees Fahrenheit in sleeping apartments and kitchens, and the said internal temperatures shall be possible of maintenance, while the outdoor air is at zero Fahrenheit, without raising the inflowing air at or issuing from the registers to temperatures higher than one hundred and sixty degrees Fahrenheit: Provided, however, that nothing in this section shall be construed as to interfere with the right of an owner or his agent from entering into a written agreement for any other specific temperature he may desire.

Section 5. All warm air heating plants shall be set on a brick, cement or such other non-combustible foundation as may be approved by the State Fire Marshall.

Section 6. All metal for furnace casings of warm air heating plants shall not be lighter than twenty-six gauge galvanized iron and shall be provided with a lining of asbestos and black iron or corrugated tin.

Section 7. All stacks or wall pipes intended to conduct heated air to the second or third story shall be equal in cross-sectional area to at least two-thirds of the cross-sectional area of the round basement pipes intended for connection therewith.

Section 8. First floor register boxes must be double or lined between the box and floor with tin and asbestos, and at the point of greatest restriction shall equal in cross-sectional area that of the round basement pipes intended for connection therewith. All warm air wall registers shall have free and open area in extent equal to at least ten per cent greater than the cross-sectional area of the round basement pipes to be used in connection therewith.

Section 9. The cold air for warm air heating plants shall be taken either from the inside or outside or may be taken partially from outside and partially from within; in no case, however, shall the cold air be supplied from any basement cellar or furnace room. The cold air to any warm air heating plant shall be conducted to the furnace or heater through galvanized iron, brick, or tile boxes, the joint of which shall be dust tight.

Section 10. Round basement pipes for connections between casings of warm air heating plant furnaces or heaters and registers, boxes or wall pipes, having diameters of twelve inches or less, shall be made of I. C. or heavier bright tin, and those having diameters of over twelve inches shall be made of I. X. bright tin or galvanized iron, not lighter than twenty-eight U. S. Standard gage, and shall have an elevation of at least one inch to the foot. Basement pipes forming connections between warm air heating plant furnace

or heater casing and register boxes or wall pipes, shall have horizontal runs of not less than two feet between the casing collar and the register box or wall pipes, except in stores, churches and buildings of one room when a register face fitted with a border can be used. Round basement pipes shall be fitted with damper so placed as to be easily accessible. Should warm air conductor pipes pass through brick, tile or cement partitions or walls, they shall be surrounded by metal thimbles having a diameter of not less than one inch more than the diameter of said pipe. Should warm air conductor pipes pass through wooden walls or partitions, they shall be provided with ventilated or safety thimbles not less than one inch larger diameter than the pipes passing through them, or such other safety device as may be approved by the State Fire Marshall.

Section 11. All smoke pipes must be of at least twenty-four gage black iron, and must be as large as smoke pipe collar provided by manufacturers. Should smoke pipes pass through wooden wall they shall be provided with ventilating or safety thimbles with inside diameter at least two inches greater than the said smoke pipe. The smoke pipe opening through the thimble shall have guides or braces so arranged as to maintain an open space of one inch entirely surrounding the smoke pipe. There shall be a space of not less than eight inches between any smoke pipe and exposed wood or plastered wooden walls or partitions. All exposed wood or wood covered with plaster that may be within twelve inches of smoke pipe shall be shielded or protected by coverings of sheet metal with lining of asbestos sheeting, or such other protection as may be approved by the State Fire Marshall.

Section 12. A furnace or heater to be installed as a component of a complete warm air heating plant shall be set or erected as near as possible to the center of the building in which it is to be installed. The owner, agent, architect or builder shall make all necessary provision for the location of furnaces or heaters as hereinbefore specified. No exposed wood or wood covered with plaster shall be placed within twelve inches of the space allotted to or provided for any heater and the casing surrounding same. There shall be an air space of not less than eighteen inches between the top of any heater and the ceiling joist above it, and a distance of not less than six inches between the top of any metal casing and the ceiling or joist unless, however, the ceiling is non-combustible.

Section 13. The owner, agent, superintendent, architect or contractor of any new building in which a warm air heating plant is to be installed shall make ample provision for the reception of register boxes and wall pipes intended for installation in walls or partitions of such building.

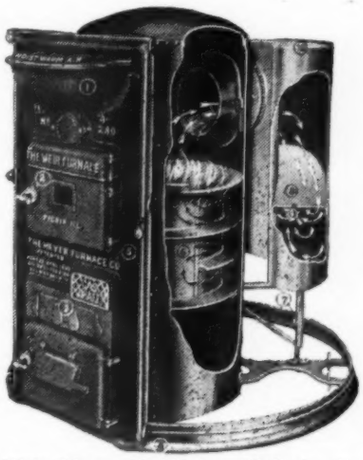
Section 14. The State Fire Marshal shall make such rules and regulations as may be necessary to carry any of the requirements of this into effect, and any person, firm or corporation who shall violate any provision of this act shall be deemed guilty of a misdemeanor and upon conviction thereof shall be subject to a fine or not to exceed fifty dollars, or imprisonment in the county jail for a period of not to exceed thirty days, or both in the discretion of the court.

ERECTS OFFICE BUILDING AND ADDS TO CAPACITY FOR MOLDING.

A two-story office building, 40x60 feet, is being erected by the Utica Heater Company, Utica, New York. The necessity for more space arises from a notable increase in the business of the Company. In line with the Utica Heater Company's policy of efficiency in every department, the new office building is to be substantially constructed of brick and equipped with the best modern conveniences. The Company is also enlarging its molding capacity 25 per cent by the addition of a new building 75x150 feet.

SHOWS IMPROVEMENTS IN BUILD.

Improvement is the life of an industry. The Meyer Furnace Company of Peoria, Illinois, manufacturers of the Weir Warm Air Heater, illustrated herewith, claims ten points of improvement for its product. They are briefly tabulated as follows:



Weir Warm Air Heater, Made by the Meyer Furnace Company, Peoria, Illinois.

(1) High water pan—provides sufficient humidity;

(2) Double enlarged feed door;

(3) Doors before shaker ports—made to fit;

(4) Casing enlarged to allow increased air space between casing and drum;

(5) Invisible air-and-gas-tight "tongue-and-groove" joint from front to main drum;

(6) Wide flanges on fire pot—provide for perfect combustion, aver the makers;

(7) Adjustable support for extra heat drum;

(8) Heat deflector compels new passage of heat, declare manufacturers;

(9) New type smoke outlet, combined with check damper and clean-out;

(10) Oxy-acetylene welded seams on drum—no joints, and according to the producers—no leakage.

There are many other interesting features of the Weir Warm Air Heater besides those above enumerated, is the claim of the producers. Complete details and information concerning an agency for these warm air heaters can be obtained from the Meyer Furnace Company, Peoria, Illinois.

WRITES ABOUT RULE FOR TESTING WARM AIR HEATERS.

To American Artisan and Hardware Record:

Referring to rule quoted in your issue of March 27th by Mr. F. J. Doyle, I carry a little loose leaf vest book of data gathered "by the way." In it I find the same figures as those given by Mr. Doyle.

but I also find noted in it "O. K. for steam at three pounds 220 degrees." I recall a test I made some years ago in August on a steam plant in a warehouse which came out fairly correct, but I am confident it does not apply to warm air plants.

I have been asked several times to test plants in summer, but have never been satisfied with the temperature comparisons. I have relied more on obtaining comparisons of velocity and temperature of the air at registers. The air at such temperatures as are required to bring rooms to 110 degrees or 123 degrees is so rarified that it can not carry as much heat as heavier air.

Yours truly,

L. W. MILLS,

Security Stove & Manufacturing Company.

Kansas City, Missouri, March 31, 1920.

ALL-STEEL DAMPER IS STRONGLY MADE.

Sometimes it is the least expected part is the cause of trouble experienced in a warm air heater. For instance, a draft may prove uncontrollable. The flue may be blamed and other devices may be suspected, but the fact that the damper may be defective is overlooked. An all-steel damper which is said to be strong in every detail is manufactured by The S. M. Howes Company, 42 Union Street, Boston, Massachusetts. Being made entirely on steel the Yankee Hot Air Damper will withstand the destructive action of heat. The damper rod is securely fastened and can be manipulated so that the damper can be set in any desired position. Wherever the Yankee Hot Air Damper has been used it has given satisfaction, declare the manufacturers. Leading jobbers throughout the country handle this all-steel damper. Free samples will be furnished dealers upon request to The S. M. Howes Company, 42 Union Street, Boston, Massachusetts.

DOCTORS POINT OUT NEED FOR FRESH AIR IN WINTER WEATHER AS A HEALTH MEASURE.

"The interiors of the majority of homes in northern countries are breeding places for disease because of the difficulties in the way of and in the objection to admitting fresh air," writes Thomas Spees Carrington, M. D., in his book, *Fresh Air and How to Use It.* Continuing, he states, "Foul air, which is full of poisonous gases exhaled from the lungs of the inmates is the usual atmosphere of the home and it can not be otherwise when our houses are built to be closed as tightly as possible.

"Today fresh air is a recognized remedy for pneumonia and tuberculosis, and it is also known to be a preventive of diseases generally. It is an essential to good health and for this reason it is necessary to make arrangements for obtaining it in every enclosed space used as a shelter by human beings. Buildings should be ventilated so that it will be impossible for those who use them to rebreathe the air which has been exhaled from their lungs.

"It is a common mistake to confuse heat and bad air or cold and good air. The fact is, the atmosphere may be below freezing point, but still be very bad, or it may be above 90 degrees and yet be perfectly pure.

"There are apparently three distinct causes which have contributed to the shut-in existence of the human family. First, the need for warmth and comfort during the long winters in northern climates; second, the fear of night air among people living in warm or tropical countries; third, the necessity during past ages of building a home that would withstand the attack of enemies.

"In all countries where the winters are severe man's ideal shelter has been one that would insure the best protection from the cold, but unfortunately this protection has been gained by excluding fresh air."

People who have warm air heaters installed in their homes can take exception to Dr. Carrington's general remark, that by insuring the best protection from the cold fresh air has been excluded. The main principle in the construction of warm air heaters is ventilation. As the doctor states, warm air can at the same time be fresh air. By heating the cold air and distributing it over the house in sufficient quantities to insure comfort, the warm air heater best meets the need for heating and ventilation. Were this the opinion of the manufacturers and distributors alone, it might be questioned by the public. But not even considering for the the moment the many users who declare their satisfaction with warm air heating systems as being healthful, we quote from the book of William S. Sodler, M. D., *The Science of Living,* wherein he says with reference to the best method of heating and ventilating: "The ideal system for winter ventilation is to warm the cold air before or as it is being taken into the room. Such a system is fairly exemplified in the modern warm air heater when it is provided with a liberal intake for outside air." Dr. Sodler's book is devoted to hygiene and sanitation. It is written for medical practitioners. And it is worth mentioning that Dr. Solder is in no way connected with the warm air heater trade. First commenting on the dire need for ventilation in the home and other buildings during cold weather, Dr. Sodler concludes with the paragraph we have quoted.

The facts set forth by both writers, given herewith, can be advantageously employed by dealers and manufacturers of warm air heaters. In the first instance one doctor deplores the ravaging effects of vitiated air. He states the necessity for a constant supply of fresh air at all times of the year. In the second quotation the author clearly declares that the ideal system is the warm air heater. To leave these facts slip by without manufacturers and dealers using them in their advertising is to waste an opportunity for convincing the public of the superiority of warm air heating.

Tell a man what he ought and ought not to do, and ten to one he'll go and do just the opposite. Let him catch you doing those very things, and before night he will be patterning after you. Queer, isn't it?

PRACTICAL HELPS FOR THE TINSMITH

CONSTRUCTION DETAIL.

By O. W. Kothe.

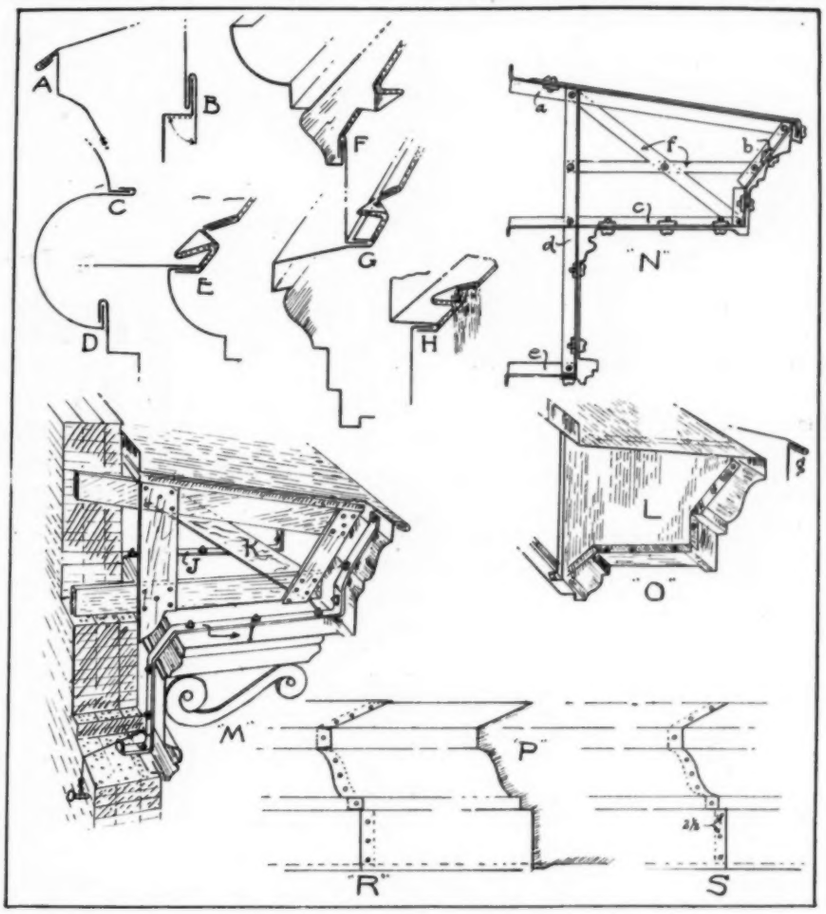
In the good old days when a man's work was his pride, we could hear one tradesman tell another "put some more rivets in there and solder it up for keeps." "Don't skimp your work—that's your reputation."

Today we hear the direct opposite. We don't only hear, but we see altogether too much ill practice going on. When an architect specifies 16 ounce copper, he naturally means and feels the job requires it. The sheet metal man comes along and makes a substitution by placing 16 ounce where the inspector is most likely to examine the work, 14 ounce is slipped in, and even 12 ounce is substituted where it can be put up without anybody being the wiser.

Instead of copper rivets or brass bolts and brass stay bars, iron rivets and bolts are used. Where architects specify certain appropriate designs to maintain the dignity of the building, or designs certain reinforcements, we see altogether too much of this cheap substituting going on. These self-styled efficiency expounders are perfectly good trade killers. Give them enough rope and they surely will hang themselves—which thing we don't deplore so much as the damage they do. We know of galvanized sheets being painted a copper color and put on the roof feeling reasonably sure the architect would never come up that high.

Well, he personally didn't, but sent one of his trustworthy inspectors up there, and scraped some of the paint off—lo and behold, it was galvanized iron instead of copper roofing. That man together with all his kind should be branded "Trade Huns." They lay awake nights scheming how they may destroy their trade, under the disguise of being compelled to figure low to get the job. It's much more noble not to take the job than to be compelled to slice it into pieces. Truly, truly, strong vices require still stronger medicines to kill or cure. Publicity is the greatest ointment to flood "Trade Huns" with light and virtually compel them to deal above board. Every staunch employer and journeyman will welcome it and feel happier than he has ever been about his trade.

Regarding good trade practice in construction of cornices, a great variety of methods present themselves. But there is only one way of fixing a job secure. The mechanical turn of mind knows this, and no matter what method is used, the job is put there to stay. For instance, all longitudinal seams should be made to shed water. Such we have in sectional details A-B-C-D-E-F and G. At H, the seam is made to permit driving rains to seep under the joint. Observe this is possible all along the seam, and not alone where the notch is cut for bending the tap. This method of locking cornices must be watched and if there is the least possible danger of rain blowing in the seams, the joint must be designed differently, or soldered its full length. Where seams are notched for bending over the taps as at C-D-E and G the cut should be well soldered to prevent seepage. Where seepage occurs the water runs to the lowest point, and soon rusts out the metal. Moisture on the inside of a cornice acts the same as under a tin roof.



Construction Detail.

Cornices of moderate size and larger should always be well reinforced with band iron stays as at I and J in sketch "M". These should be ⅛ x 1¼ flat bars for small work, and leading up to ¼ x 1½" flat bars for larger cornices. Place them from 2 to 3 feet apart—generally 30 inches. Place round head bolts in all flat

members and where possible in right angle bends as below the Ogee. These braces keep the cornice from sagging or deforming in weak parts. Bolt holes should not be made too large so the head almost passes through.

Lookouts are also important, they must be well made. In this the sheet metal man should have his say, because he knows best how securely to fasten the metal work. Carpenters seldom give a care, just so they are up there, and enable them to put the roof on. At K sketch "M" we have one design that meets with approval by most tradesmen. Where fire proof construction is required, then an angle iron lookout as at "N" is made. Observe a-b-c-d-e are angles. The size of the cornice must govern the size of angles, say from 1½ x 1½ x ⅛ to 2½ x 2½ x ¼.

When required for larger work the building engineer for structural steel designs it and only requires hanging the metal to them.

Observe the cornice at "N" with lookouts is all ready for setting on the brick or concrete work. When done this way, much labor and worry can be saved on the job. At "O" we have a sheet metal pan stay as at L. These are used for smaller cornices as lintels, etc. Very often they are made this way and put up after the building is up. The roof can be made separate with a seam as at -g- if desired. These pan stays must be securely riveted to the cornice and in places where the rivets may pull through, washers must be used, and also soldered if need be.

When examining very old cornices, we see every cross seam is well dovetailed and riveted and soldered. Later we find the dovetail was just soldered sweating the joint well, while all flat portions were riveted also. Still later practice, the dovetail was omitted, the joint lapped an inch and securely riveted, say 2½ inches apart, and well soldered. At "P" we have a cornice detail, while at "R" we show the oldest practice, and at "S" the practice of a few decades ago. It would not do to show how multitudes of men make joints today. In fact, every responsible tradesman knows and every other tradesman doesn't want to know. It hurts his vanity to be shown and so the headlight of publicity must be turned on ever stronger, brighter, and more convincing.

DISTRIBUTES FIVE GUIDE BOOKS FOR THE STEEL USER.

For the convenience of those who buy steel, Joseph T. Ryerson and Son, Chicago, Illinois, are distributing five guide books to cover the five main service districts in which they market their products. These guide books consist of five different editions of the "Ryerson Stock List," namely, Chicago edition, St. Louis edition, New York edition, Detroit edition, and Buffalo edition. The book in its various editions contains the information which users of steel require concerning structural steel shapes, bars, plates, sheets, tubes, rivets, bolts, nuts, etc. It is declared to be the key to the largest stock of steel and iron in the world. Elsewhere in this issue of AMERICAN ARTISAN AND HARDWARE RECORD will be found the advertisement of Joseph T. Ryerson and Son regarding this valuable guide book. The advertisement has a convenient coupon in the lower left corner. All that is necessary is to check the particular edition wanted and fill in the blank for name, firm, and address. This reduces to a minimum the time needed to write for the book. The dealer or contractor who takes advantage of this coupon is certain to obtain information which is likely to lead to a very profitable result. Fill in the coupon and mail it to Joseph T. Ryerson and Son, Chicago, Illinois, or St. Louis, Missouri, or New York City, or Detroit, Michigan, or Buffalo, New York, according to your nearness to any of these service branches of the firm.

MEETS STRENUOUS REQUIREMENTS.

An article which is subject to much abuse by artisans who use it is the torch. Carried about as it is from one place to another, the torch undergoes severe usage. Therefore, in order to give long and satisfactory service, it must be built unusually strong. The Number 95 Turner Double Jet Torch, depicted herewith, manufactured by The Turner Brass Works, Sycamore, Illinois, is said to be constructed to meet the adverse conditions to which torches in general are subjected. In each of its details of formation, the torch illustrated herewith is sturdy and manufactured of metal best suited for its needs. When a hot flame is desired at all times, the Number 92 Turner Double Jet Torch is recommended by the manufacturers with the conviction that it will give satisfaction. It is especially suggested for garage use in connection with light brazing, annealing and paint burning. In construction this torch differs radically from all others on the market. The adjustment is simple and is easily regulated with a precision that makes this torch applicable to exacting work. The tank is of heavy gage brass. The burner is of Turner bronze burner metal. In the bottom of the tank is the filler plug. Where it is easily operated, the pump is in the handle of the torch and the air valve is located at the base of the pump barrel. Gasolene is used as fuel. The double jet arrangement which can be seen in the illustration is a feature on the Number 92 Turner Double Jet Torch which should merit the attention of all mechanics desiring to purchase a torch. Catalogue Number 4, containing a complete description of all the torches manufactured by The Turner Brass Works, Sycamore, Illinois, can be obtained by writing to this company.

Number 92 Turner Double Jet Torch, Made by The Turner Brass Works, Sycamore, Illinois.

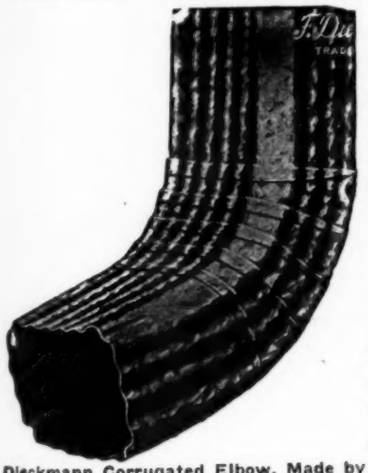
ADJUSTABLE ROOF FLANGE HAS MANY TIME-SAVING ADVANTAGES.

For the purpose of making a tight and mechanical job around vent pipes where they pass through the roof, the Hessler Adjustable Roof Flange is said to give perfect service and to possess time-saving advantages which considerably reduce the labor cost of installation. This Hessler Adjustable Roof Flange.

manufactured by H. E. Hessler Company, Syracuse, New York, is declared to be a notable improvement upon the McGuire Roof Flange formerly made by the H. E. Hessler Company and now discontinued to make way for this more efficient product. The Hessler Roof Flange is made in all sizes from 1¼ inch to and including 6 inch, galvanized or copper. All sizes are manufactured in two numbers, namely, Number 1 and Number 2. The Number 2 Hessler Adjustable Roof Flange flashes from flat to ⅓ pitch, and the number 1 from ¼ to ½ pitch. The manufacturers state that all sizes will flash extra heavy, standard or wrought pipe. Details concerning this Adjustable Roof Flange can be obtained by writing to H. E. Hessler Company, Syracuse, New York.

EMPLOYS SKILLED LABOR AND USES GOOD MATERIALS IN MAKING ELBOWS AND SHOES.

Skilled labor combined with carefully selected materials enters into the manufacture of Dieckmann Conductor Elbows and Shoes. Illustrated herewith is one of the many Conductor Elbows manufactured by The Ferdinand Dieckmann Company, Post Office Station "B," Cincinnati, Ohio. For many years this company has been manufacturing conductor elbows and shoes. The result is a product which has gained favor throughout the country. No matter what the requirements of the sheet metal contractor in the way of conductor elbows and shoes, they can be filled by the Ferdinand Dieckmann Company. Dieckman Conductor Elbows and Shoes are made of one piece of material and have no seams. The crimps are on the body, leaving the inside and back very smooth, thereby insuring a perfect flow of the water.



Dieckmann Corrugated Elbow, Made by The Ferdinand Dieckmann Company, Cincinnati, Ohio.

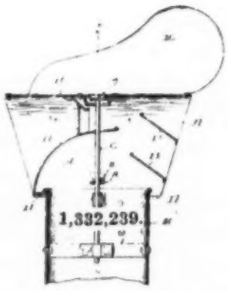
In building high grade houses it is advisable to insure that every detail of the structure contains materials of merit. In the selection of the drains and troughs it is well to select good products. Each part of this portion of the building should be of durable make. By using Dieckmann Conductor Elbows and Shoes, the lasting qualities of the draining system of a building is insured, declare the manufacturers. The latest type of machinery is employed in the production of Dieckmann products. On every piece of goods turned out by this company there is stamped its trademark. The appearance of the name *F. Dieckmann* on a shoe or elbow is a guarantee that that article will give efficient service, state the manufacturers. Sheet metal contractors should write to The Ferdinand Dieckmann Company, Post Office Station "B," Cincinnati, Ohio, for a catalogue of late issue which contains a wide range of interesting facts concerning conductor elbows and shoes.

WANT CATALOGUES FOR NEW SHOPS.

Having opened a shop of their own, Nusbaum Brothers, Fairbury, Illinois, want catalogues from the manufacturers of supplies and equipment for sheet metal work, heating and plumbing. They have a thorough knowledge of the mechanical side of the trade and also have the necessary business ability to make a success.

SECURES PATENT FOR VENTILATOR.

Under number 1,322,239, United States patent rights have been granted to Elibert B. Tonnsen, Milwaukee, Wisconsin, for a ventilator described in the following:



A ventilator comprising a rotatable, substantially horizontal hood open at both ends and provided at its underside with an opening adapted to communicate with an air shaft, a plate in the hood and curved upwardly and inwardly from one open end thereof, a V-shaped deflector located intermediate the side walls of the hood adjacent the termination of said upwardly and inwardly curved plate whereby to direct air currents toward the side walls of the hood, and means for directing the air currents emitting from the opening formed by said plate whereby to create a suction at the mouth of the air shaft.

SPECIALIZES IN THE TEACHING OF TECHNICAL SUBJECTS.

Instruction in sheet metal work has been specialized to a high degree by the St. Louis Technical Institute, St. Louis, Missouri. No more is it necessary for the apprentice to labor through many years in order to learn the essential principles of sheet metal work. The difficulty which marked the every step of the old-time student has been materially lessened. However, the knowledge gained has not been lowered in quality. In fact, the principles learned and taught at the St. Louis Technical Institute are strikingly of a highly practical value. Non-essential details are eliminated from the course of instruction. Theory, however, is not neglected. The firm theoretical principles are taught closely related to practical application. In a word, every step is taken to prepare the student in the shortest time for the sheet metal trade. All subjects in sheet metal work and heating and ventilating engineering are taught by means of the practical methods outlined in the foregoing. A coppersmith course, including instruction in laying out of all manner of fittings, especially for second and third class workers, so they may be enabled to become first-class artisans in but a few months, is offered. Copper working in its application to marine construction is included in this course. Special studies for country-town tin-

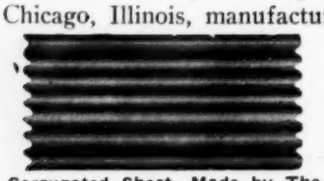
smiths in automobile repairing, outside jobbing, mensuration, and plan reading are offered. Those interested should write to the St. Louis Technical Institute, St. Louis, Missouri, to avail themselves of information relative to the practical courses of instruction given by this school.

CARRIES EVERTHING REQUIRED BY TINNERS IN STOCK.

The exhaustive scope of the stock of Frederick J. Knoedler, 68 North Second Street, Philadelphia, Pennsylvania, enables him to announce that he can supply everything required by the tinner and sheet metal contractor. From sheet metal power machines down to regular stock needs such as galvanized and black sheets, roofing tin, sheet copper, bright tin, rivets, bolts, and solder, can be procured from Frederick J. Knoedler. Each article that is obtained from this source can be relied upon as containing materials and workmanship of high merit. In the stock of Frederick J. Knoedler can be found the latest types of small tools, which are labor, time, and money savers. All sorts of sheet metal supplies can be furnished by this manufacturer and dealer upon short notice. Whether the requirements be large or small they will receive careful consideration. Shipments are made promptly because of the size of the stock. The value to the sheet metal contractor of knowing a source that can supply him with all of his needs can be readily inferred. Write to Frederick J. Knoedler, 68 North Second Street, Philadelphia, Pennsylvania, and inquire for a set of circulars describing the sheet metal line handled by him.

MANUFACTURES SHEET METAL GOODS OF HIGH GRADE MATERIALS.

Sheet metal contractors above all require materials which they can rely upon to give service after a job is completed. The uses to which sheet metal products are put are strenuous. When used as roofing, this form of metal must have rust and corrosion-resisting qualities. The Sykes Company, 930 West 19th Place, Chicago, Illinois, manufactures sheet metal products which have for many years met with satisfaction. The great number of users of the various articles made by this company suggests the quality and the workmanship embodied therein. Metal Roofing and Siding of unusual durability are manufactured by The Sykes Company. Illustrated herewith is a corrugated sheet which can be supplied either painted or galvanized, manufactured by this company. Strength is its main feature. Metal window frames and sash, glazed with wired glass, are made by The Sykes Company. These window frames are fire proof. In factories where the vibration is great or in other structures where strength is required of the windows, the metal window frames and sash manufactured by this company will prove especially applicable. Skylights of various dimensions and forms can be supplied. All kinds of skylight gearing can be furnished upon inquiry. For price list and estimates write to The Sykes Company, 930 West 19th Place, Chicago, Illinois.



Corrugated Sheet, Made by The Sykes Company, Chicago, Illinois.

SHOWS HOW TO RAISE YOUR SALARY.

Raising the value of your services so as to compel the attention of others and consequent increase in salary is worthy of a man's effort. It is not a boy's size job. There is glory in the fight. It means giving much but gaining more, says B. Christianson, the new Assistant Secretary of the Wisconsin Retail Hardware Association, Stevens Point, Wisconsin.

The case and main spring do not make the watch, nor the "honk-honk" and the rubber tires an automobile. There must be a number of minor parts, well fashioned and of good material. Each must perform its part well in order that the mechanism shall function completely. So you clerks—retail salesmen as I prefer to call you—do not underrate your value to a business or the effect of your influence upon it.

"No man should be allowed to audit the value of his own performances." That is why I ask you to take an outside view of the inside of the value of your services to the man now employing you. Look at yourself from the swivel chair and over the broad topped desk. See yourself at work as you are. Are you working with industry and showing aptitude that will lead to improvement, or are you trying to pass the hours of the day with as little effort as possible?

The first step in raising one's salary is to lay out a course of study, that will improve yourself mentally, and physically. You must learn more of yourself, more of your goods, and more of your customers.

Then learn to love your work. Learn to get enjoyment out of it. Let it be your play. Do it faithfully and do it well, and to you will come added prosperity in the form of increased compensation for work so well done.

PROVES LASTING QUALITIES IN ACTUAL APPLICATION ON JOBS.

Practical demonstration is the most exacting criterion. Where a product has proved its value repeatedly in actual use there is little room for dispute concerning that article's value. This may be said to apply with more or less exactitude to Toncan Metal, manufactured by The Stark Rolling Mill Company, Canton, Ohio. The lasting qualities of this sheet metal has been attested to by thousands of architects, sheet metal contractors and building owners, declare the manufacturers. Mainly, the success of this metal is due to its rust-resisting properties. Being strong and durable it will withstand the destructive forces of the elements of weather. Its uses are wide. In the composition of Toncan Metal enter only those materials which will add to the merits of the finished product. Being carefully selected, there is no possibility of inferior materials being employed in the manufacture of Toncan Metal. The most modern machinery is used in the manufacturing processes. The finished sheet metal is thoroughly inspected in order to insure its uniformity and quality. Because of its

lasting qualities, Toncan Metal is economical. It would be to the interest of sheet metal contractors to write to The Stark Rolling Mill Company, Canton, Ohio, and inquire for descriptive literature in order to become further acquainted with the merits of Toncan Metal.

SHEET METAL CONTAINS PROPERTIES THAT RESIST CORROSION.

Standard products have gained their reputation, for the most part, because of the quality they maintain. No article can be accepted universally until it has impressed its prospective users with its value. Hence Inland Basic Open Hearth Steel Products, manufactured by the Inland Steel Company, First National Bank Building, Chicago, Illinois, have embodied in them characteristics worthy of attention. It is said that competent authorities have declared Vismera Iron, made by the Inland Steel Company, to be an ideal metal for tanks, culverts, flumes, gutters, roofing, and for any other articles which are exposed to the elements of weather or acids and corrosive fumes. The process of manufacture Vismera Iron goes through is said to make this metal as strong as steel. Being a workable metal, Vismera Iron can be easily bent and formed into various shapes. According to the manufacturers, this sheet metal is nearly as rust-proof as copper. In making Vismera Iron the Inland Steel Company uses new materials only. No scraps enter into the manufacturing process. Vismera Iron is sold in sheets and plates. Special data and information can be obtained by writing to the Inland Steel Company, First National Bank Building, Chicago, Illinois.

NOTES AND QUERIES.

Cotton Rubber Lined Water Conducting Hose.

From Charles F. Scott, Memphis, Texas.

Please inform me who makes cotton rubber lined water conducting hose.

Ans.—Dominion Asbestos and Rubber Corporation, 154 Nassau Street, New York City; Thermoid Rubber Company, Trenton, New Jersey; B. F. Goodrich Company, Akron, Ohio.

Wire Lamp Shade Frames.

From John F. Cartwright, 224 Main Street, Bowling Green, Kentucky.

Kindly advise who makes wire lamp shade frames.

Ans.—City Wire Frame Company, 726-32 South Wabash Avenue; T. C. Dallmer Manufacturing Company, 9 West Kinzie Street; both of Chicago, Illinois.

"Success" Blue Flame Oil Stove.

From Phelps Hardware Company, 309 First Avenue, Sterling, Illinois.

Can you tell us who manufactures the Success blue flame oil stove?

Ans.—Pittsburgh Lamp Brass and Glass Company, Pittsburgh, Pennsylvania.

Angle Bending Machine.

From Standard Sheet Metal Works, 1184 Twenty-fourth Street, Milwaukee, Wisconsin.

We would like to know who makes a machine for bending small angles from one inch to one and three-quarter inch.

Ans.—Wallace Supplies Manufacturing Company, 416 Orleans Street, Chicago, Illinois; Joseph T. Ryerson and Son, 2558 West 16th Street, Chicago, Illinois; Berger Brothers Company, Philadelphia, Pennsylvania; Bertsch and Company, Cambridge City, Indiana; Frederick J. Knoedler, 68 North Second Street, Philadelphia, Pennsylvania; Niagara Machine and Tool Works, Buffalo, New York.

Circular Caps of Twenty Gage Sheet Iron.

From I. X. L. Tire Company, Peoria, Illinois.

Where can we secure circular caps of twenty gage sheet iron or black iron with one inch flange; or circles cut sizes twenty-five inches in diameter with three quarter to one inch flange spun all the way around the outer circumference?

Ans.—Chicago Metal Manufacturing Company, 313 South Clinton Street; Joseph T. Ryerson and Son, 2558 West 16th Street; both of Chicago, Illinois.

Westinghouse Electric Sad Iron.

From J. H. Uplinger, Kingston, Dekalb County, Illinois.

Kindly advise who makes the Westing house electric sad iron.

Ans.—Westinghouse Electric and Manufacturing Company, East Pittsburgh, Pennsylvania.

Washing Machine With Gasolene Engine.

From Burt Hosterman, 144 Willard Avenue, North Milwaukee, Wisconsin.

Will you please let me know who manufactures a washing machine with a gasolene engine attached?

Ans.—Altorfer Brothers Company, Peoria, Illinois; Automatic Electric Washer Company, Newton, Iowa; H. F. Brammer Manufacturing Company, Davenport, Iowa; Brokaw-Eden Manufacturing Company, Alton, Illinois; Globe Manufacturing Company, Perry, Iowa; Michigan Washing Machine Company, Muskegon, Michigan; White Lily Manufacturing Company, Davenport, Iowa.

Models of Sheet Metal Devices.

From J. M. Decker, P. O. Box 571, Douglas, Arizona.

1. Can you give me the name of a firm that develops and makes models of small devices that are made of sheet metal? 2. Also is this kind of work done by Ideal Machine and Tool Company; The Eagle Manufacturing Campany, and the Crescent Tool Company; all of Cincinnati, Ohio?

Ans.—1. United Pattern and Model Company, 2757 North Washtenaw Avenue, Chicago, Illinois; Wade Pattern and Engineering Works, 4845-49 West Grand Avenue, Chicago, Illinois, make such models. 2. We understand that the three firms you mention, namely, The Ideal Machine and Tool Company; The Eagle Manufacturing Company, and The Crescent Tool Company also do this kind of work, and if you will write them direct giving them your requirements they undoubtedly will be glad to give you full information.

Splitting Shear.

From W. C. Eichorn, 908 Chicago Avenue, Evanston, Illinois.

Please inform me who makes a splitting shear.

Ans.—Bertsch and Company, Cambridge City, Indiana; Joseph T. Ryerson and Sons, 2558 West 16th Street, Chicago, Illinois; Niagara Machine and Tool Works, Buffalo, New York; C. Wagner De Witt. Cedar Rapids, Iowa; Berger Brothers Company, Philadelphia, Pennsylvania; Frederick J. Knoedler, 68 North Second Street, Philadelphia, Pennsylvania; Marshalltown Manufacturing Company, Marshalltown, Iowa; Viking Shear Company, Erie, Pennsylvania.

WEEKLY REPORT OF TRADE AND THE MARKETS

THE TRANSPORTATION SITUATION IS STILL UNSATISFACTORY IN ITS EFFECT ON OUTPUT OF STEEL.

While there has been some improvement noted in the transportation situation in a few scattered quarters, the general run of car supplies is still well below the requirements and production is hampered by the sheer lack of facilities to move stocks. This situation has been rehashed so often that there is nothing new in it save its continuation. Many of the large steel producers which have very heavy business on their books have been obliged to curtail operations to some extent but still find themselves at the end of the week with finished materials on hand and without facilities for moving them. The cure for this situation seems to lie in additional supplies of steel for the roads to replace the worn out rolling stock.

The demand has been cut down somewhat as consumers have been educated to the fact that supplies are so short that it is of prime importance that orders be cut down as far as possible. Even with the inquiry thus reduced to current necessities, the mills are unable to cope with it and demand still runs in excess of supplies.

Ship steel is in strong demand, and reports from all of the mills turning out this description as optimistic to the extreme as far as demand is concerned. A few orders have been cancelled—many more have been booked. The demand for structural steel is strong, although the exorbitant costs of building operations at the present time have forced the cancellation of many projects. In addition to the steel entering into calculations on the building programs, the high price of labor, lumber and all other materials tend to discourage many badly needed building projects.

STEEL.

In some quarters it has been expected that the leading interest was planning to advance prices to a level more in keeping with the present standards set by the independents. There is no confirmation of this report other than the action of some of the subsidiaries of the corporation which have booked orders for the future at a price to be settled at time of delivery.

For the week past buying of iron and steel has been in decreasing quantities, but the market is not weak at all. Simply a reduction in feverish spot buying and a more healthy condition of the market coming to the surface. Transportation is showing a slight change for the better and mill shipments are increasing, but the necessity for stacking finished material in certain districts has not been overcome as yet.

The week's structural contracts are encouraging, some 25,000 tons being reported booked. The placing of orders for railroad cars and equipment is still slow, but this is due to financial conditions of roads, scarcity of steel and the difficulty of some railroad companies to get their existing rolling stock into their own hands long enough to estimate their present needs. Also, high prices are an item not to be ignored, especially so in the face of the fact that a single box car costs $3,600, as compared with the pre-war price of $800. However, some contracts are being placed and inquiries remain strong.

COPPER.

The most encouraging feature of the copper situation is the indication of heavy melting by domestic consumers. According to some authorities in the trade, home consumption today is at rate of about 130,000,000 lbs. a month, which is more than double the average monthly consumption prior to the war. Last year home melting average about 100,000,000 pounds a month but during the last six months of the year, consumption was as much as 120,000,000 lbs. a month, compensating in a large measure for the light melting during the first quarter of the year.

The recent statement made by Mr. Ryan indicates that current consumption outside of the United States is at a rate of nearly 120,000,000 pounds a month, of which about 22,000,000 pounds is attributed to Japan and a little less than 100,000,000, pounds to Europe. Small difficulty to meet this demand, however, is likely considering stocks still held here and abroad. A world's available supply of 3,500,000,000 pounds in 1920 seems probable even without increasing the production in this country to any great extent, but the rest of the world is dependent upon the United States for supplies even to a greater extent than in the past.

The leading producing interests are reported to be undertaking the organization of a finance corporation the object of which will be to make it possible for foreign consumers to purchase stocks of copper. Apparently this movement is promoted by the difficult foreign exchange situation, as it seems not to take into consideration the more vital fact that lack of coal is chiefly responsible for the inability of European copper consumers to get their business operations going again. However, this new organization, which is a sort of natural outgrowth of the Copper Export Association, will assist foreign consumers to buy when the industrial affairs of their countries finally get into such shape as to enable them to resume operations.

Domestic consumers need a very large tonnage of copper. Apparently the spring buying movement has

started. It seems not unlikely that it will absorb the existing surplus supplies so completely as to make a foreign market unnecessary until the producing companies increase their volume of output. Copper is unlikely to sell for 18.00 cents again for many years.

TIN.

Although the speculative London tin market showed with fluctuations last week and values were down £15 per ton, the domestic market displayed a more steady undertone and at the level of 60 cents a pound for Straits spot consumers were ready buyers. With a steadily rising sterling exchange market, the tendency in tin seems to be upward again, but too little is known about the speculative postion in London and any further forced liquidation might upset the market again. American producers of pure tin so far have not met the decline and their asking price is still about 2 cents per pound above the Straits spot price.

LEAD.

The consumption of lead is still undoubtedly in large volume, and bids fair to continue so, the demands from building and other trades being heavy. But lead is in more liberal supply for prompt shipment, and buyers are disposed to hold off as long as possible on early requirements and are indisposed to contract for futures, though the latter are offered in the outside market at a considerable discount.

SOLDER.

An advance in the prices of solder has taken place in the Chicago market. The present quotations are as follows: Warranted, 50-50, per pound, 41 cents; Commercial, 45-55, per pound, 38.30 cents; and Plumbers', per pound, 35.60 cents.

ZINC.

The zinc producers' attitude is still firm and their asking prices above the present level, and they show as yet, no pressure of selling necessity, although it is likely that the tonnage yet to be marketed for second quarter is fairly heavy, as they have been aloof from the market in general for a good many weeks in the hope of obtaining the prices which were prevailing in February.

TIN PLATE.

Reports from Pittsburgh indicate that no substantial improvement has been made in the movement of tin plate, for only in a few instances have manufacturers been able to secure any more cars than recently. With production on a comparatively full scale further piling of finished material has been necessary. Independent manufacturers still are booking contracts for last half tonnages from their regular customers, in most cases at prices in effect at time of delivery. No business in standard tin plate is being accepted for delivery over the remainder of the first half, as all makers are so heavily committed that entering of new orders would involve sacrificing old business to fill them.

From New York comes a report to the effect that heavy buying by speculators against purchases of Japan of tin plate has forced up the price per base box and that Japan has refused to pay this price.

SHEETS.

In the Chicago market galvanized sheets of all gages have advanced 25 cents per hundred pounds. In the Pittsburgh district, lack of adequate transportation facilities still is keeping down the movement of sheets, and all manufacturers are piling a good deal of their current production. While the car supply for a number of manufacturers has improved slightly as a result of the warmer weather, only in a few instances has the improvement enabled sheet makers to bring shipments abreast of production. Shortage of steel still is preventing full mill operations although it is not quite as potent a factor in this direction as it was a short time ago.

Apportionment of its remaining sheet tonnage for last half probably will be taken up by the leading independent producer in the Chicago district within a fortnight. No schedule of sizes or prices has been determined and its books probably will not be opened, in the usual sense of the term. Demand continues strong with inability of buyers to place their business. Prices are a matter entirely of individual cases, with the limit practically what any consumer is willing to bid, based on his necessity.

OLD METALS.

Wholesale quotations in the Chicago district which may be considered nominal are as follows: Old steel axles, $33.00 to $35.00; old iron axles, $37.00 to $38.00; steel spring, $25.50 to $36.50; No. 1 wrought tion, $26.50 to $27.00; No. 1 cast, $37.50 to $38.50, all net tons. Prices for non-ferrous metals are as follows, per pound: Light copper, 14 cents; light brass, 9 cents; lead, 6½ cents; zinc, 5½ cents; cast aluminum, 22½ cents.

PIG IRON.

According to the market report of Rogers, Brown and Company, Cincinnati, Ohio, pig iron consumers have shown more interest in spot shipments during the past week and sales were at a slightly increased rate. Some of the larger buyers who deferred buying for the last half, have put out inquiries and a number of sales were made. Foundries continue exceedingly busy, and are constantly turning down opportunities to make important tonnages of castings. This tonnage is quite sizeable and will prolong the present period of heavy consumption. The recent export inquiry developed into sales of several 1,000 tons, and other inquiries for European countries now under negotiation look very favorable. Buyers continue to urge shipments, and while deliveries are somewhat better, they are still very unsatisfactory. Embargoes continue in force, especially throughout New England, due to recent weather conditions in that territory. The car shortage also is very materially felt in many fields; however, these condtions should adjust themselves with improved weather. Prices have shown little if any change for prompt or extended delivery.

Current Hardware and Metal Prices.

AMERICAN ARTISAN AND HARDWARE RECORD is the only publication containing Western Hardware and Metal prices corrected weekly.

METALS.

PIG IRON.

Basic	$43 00
Southern Fdy. No. 2	46 60
Lake Sup. Charcoal	57 50-60 50
Malleable	43 50

FIRST QUALITY BRIGHT TIN PLATES.

			Per box
IC	14x20	112 sheets	$15 80
IX	14x20		17 75
IXX	14x20		19 45
IXXX	14x20		20 90
IXXXX	14x20		22 15
IC	20x28		31 60
IX	20x28		35 50
IXX	20x28		38 90
IXXX	20x28		41 80
IXXXX	20x28		44 30

COKE PLATES.

Cokes, 180 lbs	20x28	$19 30
Cokes, 200 lbs	20x28	19 50
Cokes, 214 lbs	IC 20x28	19 90
Cokes, 270 lbs	IX 20x28	22 30

BLUE ANNEALED SHEETS.

No. 10 per 100 lbs.	$5 27
No. 12 per 100 lbs.	5 32
No. 14 per 100 lbs.	5 37
No. 16 per 100 lbs.	5 45

ONE PASS COLD ROLLED BLACK.

No. 18-20 per 100 lbs.	$6 80
No. 22-24 per 100 lbs.	6 85
No. 26 per 100 lbs.	6 90
No. 27 per 100 lbs.	6 95
No. 28 per 100 lbs.	7 00
No. 29 per 100 lbs.	7 10

GALVANIZED.

No. 16 per 100 lbs.	$8 75
No. 18-20 per 100 lbs.	8 65
No. 22-24 per 100 lbs.	8 80
No. 26 per 100 lbs.	8 95
No. 27 per 100 lbs.	9 10
No. 28 per 100 lbs.	9 25
No. 30 per 100 lbs.	9 75

WELLSVILLE POLISHED STEEL.

No. 18-20 per 100 lbs.	$7 10
No. 22-24 per 100 lbs.	7 20
No. 26 per 100 lbs.	7 0
No. 27 per 100 lbs.	7 40
No. 28 per 100 lbs.	7 50

KEYSTONE HAMMERED POLISHED STEEL.

Discontinued. New product will be announced later.

BAR SOLDER.

Warranted, 50-50 per 100 lbs.	41 00
Commercial, 45-55 "	38 30
Plumbers' "	35 60

ZINC.

In slabs 9½c

SHEET ZINC.

Cask lots	14 c
Less than cask lots	14½-14½c

COPPER.

Copper Sheet, base 29½c

LEAD

American Pig	9 75
Bar	10 00

Sheet.

Full coils per 100 lbs.	$12 65
Cut coils per 100 lbs.	12 90

TIN.

Pig tin	68½c
Bar tin	70 c

HARDWARE.

ADZES.

Carpenters'.
Plumbs ..... Net

Coopers'.
Barton's ..... Net
White's ..... Net

Railroad.
Plumbs ..... Net

AMMUNITION.

Shells, Loaded, Peters.
Loaded with Black Powder. Less 18%
Loaded with Smokeless Powder, medium grades ..... Less 18%
Loaded with Smokeless Powder, high grade ..... Less 18%

Winchester.
Smokeless Repeater Grade. Less 15%
Smokeless Leader Grade ... Less 15%
Black Powder ..... Less 15%

U. M. C.
Nitro Club 18%
Arrow 18%
New Club 18%

Gun Wads—per 1000.

Winchester 7-8 gauge	10&7½%
" 9-10 gauge	10&7½%
" 11-28 gauge	10&7½%

Powder.	Each
DuPont's Sporting, kegs	$11 25
" " ½ kegs	3 10
DuPont's Canisters, 1-lb.	56
" Smokeless, drums	43 50
" " kegs	22 00
" " ½-kegs	5 75
" " canisters	1 00
L. & R. Orange, Extra Sporting kegs	11 25
L. & R. Orange, Extra Sporting ½-kegs	5 90
L. & R. Orange, Extra Sporting ¼-kegs	3 10
L. & R. Orange, Extra Sporting 1 lb. canisters	56
L. & R. Orange, Extra Sporting ½ lb. canisters	32
L. & R. Orange, Extra Sporting ¼-lb. canisters	22
Hercules "E.C." and "Infallible" 50 can drums	43 50
Hercules "E. C.," kegs	22 50
Hercules "E. C.," ½-kegs	11 25
Hercules "Infallible," 25 can drums	22 00
Hercules "Infallible," 10 can drums	9 00
Hercules "E. C.," ¼-kegs	5 75
Hercules "E.C." and "Infallible" canisters	1 00
Hercules W. A. .30 Cal. Rifle, canisters	1 25
Hercules Lightning Rifle, canisters	1 25
Hercules Sharpshooter Rifle, canisters	1 25
Hercules Unique Rifle, canisters	1 50
Hercules Bullseye Revolver, canisters	1 00

ANVILS.

Solid Wrought ..... 23 & 23½ per lb.

ASBESTOS.

Board and Paper, up to 1/16" 17c per lb.
Thicker ..... 18c per lb.

AUGERS

Boring Machine ..... 40@40&10%
Irwin's 25%

Carpenter's Nut 50%

Hollow.
Bonney's ..... per doz. 30 00

Post Hole.
Iwan's Post Hole and Well 30%
Vaughan's, 4 to 9-in. .. per doz. $14 00

Ship.
Ford's, with or without screw, Net list

AWLS.

Brad.

No. 3 Handled ..... per doz.	$0 65
No. 1050 Handled ..... "	1 40
Shouldered, assorted 1 to 4, ... per gro.	4 00
Patent asst'd, 1 to 4 .. "	85

Harness.

Common ..... "	1 05
Patent ..... "	1 00

Peg.

Shouldered ..... "	1 60
Patented ..... "	75

Scratch.

No. IS, socket hand'ld. per doz.	2 50
No. 344 Goodell-Pratt, List, less	35-40%
No. 7 Stanley "	2 25

AXES.

First Quality, Single Bitted, 3 to 4 lb ..... per doz.	15 50
First Quality, Double Bitted, ... per doz.	20 50

Broad.

Plumbs, West, Pat	List
" Can. Pat	$69 00
Firemen's (handled), ... per doz.	21 00

Single Bitted (without handles).

	Prices
Warren Silver Steel	on application
Warren Blue Finished	"

Double Bitted (without handles).
Warren's Natl. Blue, 3½ to 4½ lb ..... Prices on application
The above prices on axes of 3 to 4 lbs. are the base prices.

BAGS, PAPER NAIL.

Pounds	10	16	20	25
Per 1,000	$5 00	6 50	7 50	9 00

BALANCES, SPRING.

Sight Spring	Net
Straight	Net

BARS, CROW.

Pinch or Wedge Point, per cwt. .... $8 00 to $9 00

BASKETS.

Clothes.

Small Willow ..... per doz.	15 00
Medium Willow ..... "	17 00
Large Willow ..... "	20 00

Galvanized	1 bu.	1½ bu.
Per doz	$16 08	$18 72

BEATERS.

Carpet.	per doz.
No. 7 Tinned Spring Wire	$1 10
No. 8 S ring Wire coppered	1 50
No. 9 Preston	1 75

Egg.	Per doz.
No. 50 Imp. Dover	$1 10
No. 102 " " tinned	1 35
No. 150 " " hotel	2 10
No. 10 Heavy hotel tinned	2 10
No. 13 " " "	3 30
No. 15 " " "	3 60
No. 18 " " "	4 50

Hand.

	8	9	10	12
Per doz.	$11 50	13 00	14 75	18 00

Moulders'.
12-inch ..... Per doz. 20 00

BELLS.

Call.
3-inch Nickeled Rotary Bell, Bronzed base ..... per doz. $5 50

Cow.
Kentucky 30%

Door.	Per doz.
New Departure Automatic	$7 50
Rotary.	
3 -in. Old Copper Bell	6 00
3 -in. Old Copper Bell, fancy	8 00
3 -in. Nickeled Steel Bell	6 00
3½-in. Nickeled Steel Bell	6 50

Hand.

Hand Bell polished	List plus 15%
White Metal	" 15%
Nickel Plated	" 5%
Swiss	" 10%

Miscellaneous.

Church and School, steel alloys				30%
Farm, lbs	40	50	75	100
Each	$3 00	3 75	5 50	7 25

BEVELS, TEE

Stanley's rosewood handle, new list	Nets
Stanley's iron handle	Nets

BINDING CLOTH.

Zinced	55%
Brass	40%
Brass, plated	60%

BITS.

Auger.

Jennings Pattern	Net
Ford Car	List plus 5%
Ford's Ship	" "
Irwin	35%
Russell Jennings	plus 20%
Clark's Expansive	33⅓%
Steer's " Small list, $22 00	5%
" " Large " $26 00	5%
Irwin Car	35%
Ford's Ship Auger pattern Car	List plus 5%

Center 10%

Countersink.

No. 18 Wheeler's	per doz.	$2 25
No. 20 "	"	3 00
American Snailhead	"	1 75
" Rose "	"	2 00
" Flat	"	1 40
Mahew's Flat	"	1 60
" Snail	"	1 90

Dowel.
Russell Jennings ..... plus 20%

Gimlet.
Standard Double Cut ... Gross $8 40
Nail Metal Single Cut ..... Gross $4.00—$5.00

Reamer.

Standard Square	Doz.	2 50
American Octagon	"	2 50

Screw Driver.

No. 1 Common	40
No. 26 Stanley	75

BLACKING, STOVE. (See Polish)

BLADES, SAW.

Butchers'.
Standard, ¾ & 1½-in.....Nets
Clock Spring..... "
Star..... "

Hack.
Atkins.....5%
Star.....Nets

Wood.
Disston
Nos..... 6 66 26
$8 00 $8 50 $8 00
Atkins
Nos..... 2 14 18
$3 85 $6 50 $4 75

BLOCKS.

Wooden.....20%
Patent.....20%

BOARDS.

Stove.
Wabash Crystal.....Net Prices
Wabash Oriental..... "
Wabash Mosaic..... "
Wabash Delft Enameled.. "
Wabash Art Inlay..... "

Walk.
No. 760, Banner Globe, single) .....per doz. $5 25
No. 652, Banner Globe, (single) .....per doz. 6 75
No. 801, Brass King.. " 8 25
No. 860, Single—Plain Pump 6 25

BOLTS.

Carriage, Machine, etc.
Carriage, cut thread, ½x6 and sizes smaller and shorter..40&10%
Carriage, sizes larger and longer than ½x6..... 20%
Machine, ¼x4 and sizes smaller and shorter..... 50&10%
Machine, sizes larger and longer than ½x4 .....15%
Stove 70%
Tire.....60%

Mortise, Door.
Gem, iron..... 5%
Gem, bronze plated..... 5%

Barrel.
Cast.....Nets
Wrought..... "
Wrought, bronzed..... "

Flush.
Wrought..... "

Spring.
Wrought..... "
Wrought, heavy..... "

Square.
Wrought..... "

BORERS.

Angular.
Miller's Falls.....per doz. $23 00
Sill borers, No. 51... " 34 00
" " 52... " 39 50

Bung. Doz.
Enterprise Mfg. Co.'s No. 1....10%
" " " No. 2....10%

BOXES.

Mail, No..... 2 4 10
Per doz.....$18 00 23 00 29 00

Miter.
Stanley's.....Net Prices
Stearns, No. 2.....per doz. $30 00

BRACES.

Fray's Genuine Spofford's..20&10%
" No. 08.....$7 50
" No. 010..... 8 00

BRACKETS.

Hay Rack.
Wenzelmann's No. 1, per doz. sets.....$18 00
Wenzelmann's No. 2, per doz. sets..... 19 20

Shelf.
Wrought Steel 40%

Well.
Oak, Wrought Iron Riveted Top Ears.....per doz. $8 00

BURRS, RIVETING.

Copper Burrs only.....25% above list
Tinners' Iron Burrs only.....30%

BUTTS.

Cast Iron.....7½%
Wrought Brass (New List).....Plus 5%
Wrought Steel, Bright.....40%
Wrought Steel, Japanned....Net prices

CALIPERS.

Double.....Nets
Inside and Outside..... "
Wing..... "

CALKS.

Logger's Boot.
(Lufkin R. Co.'s), per M.....$7 00

Toe.
Blunt and medium, 1 prong, per 100 lbs.....$6 20
Sharp, 1 prong, per 100 lbs.... 6 70

CANS.

Milk.
Elgin.
Gals..... 5 8 10
Each.....$4 00 $5 15 $5 15
Iowa Pattern.
Gals..... 5 8 10
Each.....$4 00 $5 15 $5 15

CAN OPENERS.

See Openers.

CAPS, GUN.

See Ammunition.

CARPET STRETCHERS.

See Stretchers.

CARRIERS.

Hay.
Diamond, Regular....each, Nets
Diamond, Sling..... " "

CARTRIDGES.

See Ammunition.

CASTERS.

Standard—Ball Bearing.....50&10%
Bed.....40%

Common Plate.
Brass Wheel.....15%
Iron and porcelain wheels, new list.....50%
Philadelphia Plate, new list....50%
Martin's.....40%

CATCHERS, GRASS.

No. 160S, per doz $12 25
No. 165S, " 14 00

CEMENT, FURNACE.

American Seal, 5 lb. cans, net $0 45
" " 10 lb. cans, " 90
" " 25 lb. cans, " 1 87
Pecora, 5 lb. cans..... " 45
" 10 lb. cans ..... " 90
" 25 lb. cans..... " 1 87

CHAIN AND CHAINS.

Breast Chains.
Doubleslack.....doz. pairs, $8 50
With Covert Snaps " 5 80
With Slide..... " 5 00
Without Slide.... " 4 60

Picture Chains.
Light Brass, 3 ft.....per doz. $1 25
Heavy Brass, 3 ft.... " 1 75

Sash Chain. (*Morton's*)
Steel, per 100 ft.
0..... $2 50
2..... 3 10
1..... 3 60

Champion Metal.
0R..... 5 40
2R..... 5 60
1R..... 7 75

Champion Metal.-Extra Heavy.
1H..... 9 50

Cable Sash Chain.
Steel.....List Net Plus 15%

CHALK, CARPENTERS'

Blue.....per gro., $1 40
Red..... " 1 40
White..... " 1 25
Common White School Crayon..... " 25c

CHARCOAL.

In bags.....per bag $1.70

CHECKS, DOOR.

Corbin.....Net list
Russwin.....20%

CHIMNEY OPS.

Iwan's Volcano.....35%

CHISELS.

Box.
Inches..... 12 14
Round, per doz.....$5 25 5 75
Flat, per doz 7 25 8 25

Cold.
Good quality, ½ in. and larger.....Nets
Smaller size, per doz.....Nets

Socket, Firmer.
Ohio.....Price on Application

Socket, Framing.
Ohio..... Price on Application

Tanged, Firmer.—Barton's.
With handles.....Net list

Choppers, See *Cutlers, Meat.*

CHUCKS, DRILL.

Goodell's, for Goodell's Screw Drivers..... List less 35-40%
Yankee, for Yankee Screw Drivers..... 6 00

CHURNS.

Anti-Bent Wood,
Gal..... 5 7 10
Each.....$3 90 4 60 4 85
Belle, Barrel.....65&7½%
Common Dash,
Gal..... 5 7
Per doz..... 17 00 19 00

CLAMPS.

Adjustable.
Martin's.....30%
No. 63, Screw.....20%

Cabinet.
Screw.....20%

Carpenters'.
Steel Bar.....List price plus 25%

Carriage Makers'.
2½".....per doz. $7 00
5"..... " 14 00
8"..... " 28 00
12"..... " 46 00

Quilt Frame.
No. 30 Ball and Socket, 2½" head.....per gross $11 25
No. 50, Ball and Socket, 3½" head..... per gross 12 25

Hose.
Sherman's, brass, ½-in.. per doz..48c
Double, brass, ½-in.. " 1 20

Saw Filers.
Wentworth's, No. 1, $12.50; No. 2, $18.25. No. 3, $16.25.

CLAWS, TACK.

Wood hdl. No. 10.....per doz. $0 95
Forged steel, wood hdle. " $1 75
Solid steel..... " 2 40
Giant..... " 50

CLEANERS.

Drain.
Iwan's Adjustable.....25%
Iwan's Stationary 30%

Pot.
Wire.....per doz. $0 75

Side-Walk.
Steel.....per doz., Net prices

CLEAVERS.

Family.
Beatty's, inch 7 8 9 10
Per doz..$27 00 29 00 33 00 36 00

CLEVISES.

Malleable .....10c lb.

CLIPPERS.

Bolt..... $2 25&6 00

CLIPS.

Axle.....65&5%

Damper.
Standard.....per doz. 70c
Troy ..... " 38c

Hame ..... " 50c

CLOTH.

Emery.
Star .....New Prices
B. & A..... " "

Hardware Wire— Prices on application
Full rolls (100 ft.)
12 Mesh, galvanized.... "
14 " " .... "
16 " " .... "
18 " " .... "

Screen Wire. Prices on application.
12 mesh, painted, per 100 sq. ft... ....

COLLARS, STOVE PIPE.

Lacquered.
Inches 5 6 7
Fancy pattern, per doz..... 80c 85c $1 15

COMPASSES.

Carpenters'.....15%

COPPER—See Metals.

COPPERS—Soldering.

Pointed Roofing
3 lb. and heavier.....per lb. 37c
2½ lb..... " 38c
2 lb..... " 37c
1½ lb..... " 40c
1 lb..... " 43c

CORD.

Picture.
White Wire. .....60&5%

Sash.
Sampson Spot, No. 7. per doz. $24 50
Sampson Spot, No. 7. per doz. $29 40

CORKSCREWS.

Walker's.....30%
Williamson's Regular.....35&11%
Williamson's Forged Worm.....40%

COTTERS, SPRING.

All sizes.....87½%

COUPLINGS, HOSE.

Brass.....per doz. $2 25

COVERS, WAGON—See Tents.

CRADLES, GRAIN.

Morgan's Grapevine .per doz.$45 00

CRAYONS—See Chalk.

CUTTERS

Glass.
Woodward.....40%

Meat.
Enterprise—Nos. 5 10 12
Each $2 50 $4 25 $3 75
Nos. 22 32
" 6 50 8 50

Pipe.
Saunders', No. 1 2 3
Each $1 85 2 75 6 75

Slaw and Kraut. Per doz.
4-knife Kraut.....$20 00-55 00
3-knife Kraut, 8x27 in.. 13 00-18 00
1-knife Slaw..... 2 50
2-knife Slaw..... 3 00
Washer..... 11 00

DAMPERS, STOVE PIPE.

Ideal
3".....$1 00
4"..... 1 05
5"..... 1 15
6"..... 1 25
7"..... 2 20
8"..... 3 75
10"..... 6 00

DIES AND STOCKS.

Discount.....New List

DIGGERS.

Post Hole.
Eureka.....per doz. $14 50
Iwan's Split Handle (Eureka)
4-ft. Handle.....per doz.. 15 00
7-ft. " " " 20 00
Iwan's Perfection (Atlas) " 15 50
Iwan's Hercules pattern " 18 00
See also Augers—Post Hole.
Dividers, Wing.....25%

DOOR CHECKS—See Checks.

DOORS, SCREEN

1¾-in. 4-panel, painted..... Net Prices
1⅜-in. 4-panel, painted..... "
1⅜-in. 3-panel, natural pine, fancy..... "

DOOR HANGERS—See Hangers.

DRILLS.

Blacksmiths' Twist. (New List)....40%

Breast.
Millers Falls No. 12....Each, $46 00
" " " 112.... " 26 00

Hand.
Goodell's Automatic.
Nos. 01 03
Per doz. 12 00 14 40
Goodell's Single Gear, per doz. 15 75
Goodell-Pratt No. 4½ per doz. list, less.....30%
Goodell-Pratt No. 379 per doz. list, less.....30%

Reciprocating.
Goodell's.....per doz 26 00

DRIVERS, SCREW.

Standard..... Nets
Lock Ferrule..... "
Champion..... "
Champion Pattern..... "
Clark's Interchangeable..... "
Edison..... "
Reed's Lightning..... "
Goodell's Spiral..... "
Yankee Ratchet..... "
" Spiral..... "

EAVES, TROUGH.

60-5% off Standard List.

ELBOWS—Stove Pipe.

1-piece Corrugated, Uniform.
Doz
5-inch.....$1 8
6-inch..... 1 9
7-inch..... 2 2

Uniform, Collar Adjustable
Doz.
5-inch.....$2 40
6-inch..... 2 45
7-inch..... 2 75

ELBOWS—Conductor Pipe.

Galvanized Steel, Tin and Terne, Round Corrugated.

Size.	Doz.
2-inch	60%
3-inch	60%
4-inch	60%
5-inch	60%
6-inch	60%

EMERY, TURKISH.

Size	1-lb.	5-lb.	10-lb.
Per pound	18c	14c	13c

EYES.

Bright Wire Screw—See Ooods, B. W.
Drifting Pick.....60, 10&5%

Hooks and Eyes—
Brass, 1½" No. 60..per gross, $3 50
Iron " " 50.. " 1 60

FASTENERS, STORM SASH.

Shroeder's.....per doz. $1 50
Sensible..... " 3 00

FILES AND RASPS.

Delta
Delta.....30%
Swiss.....List plus 25%
Utility..... " net.

Nicholson's—
American.....60%
Arcade.....50-10-7½%
Black Diamond.....50&5%
Eagle.....50-10-7½%
Great Western.....50-10-7½%
Kearney & Foot.....50-10-7½%
McClellan.....50-10-7½%
Nicholson brand.....50&7½%
J. Barton Smith.....50&2½%
X-F Swiss Pattern.....Net list.

Simonds'.....50%
Disston's.....50&10%
Heller's.....60&10%

FORKS.

Barley.
Steel, new list.....New Prices
Hay.
2-tine.....New prices
3- " .....New prices
4- " .....New prices
Digging.....New prices
Scoop.....New prices
Header.
3-tine.....New prices
4- " .....New prices
Manure.
4-tine.....New prices

FREEZERS—ICE CREAM.

White Mountain	1-quart		....	Prices on application
" "	2	"	....	
" "	4	"	....	
" "	6	"	....	
Arctic	1	"	....	
"	2	"	....	
"	4	"	....	
"	6	"	....	

GAUGES.

Cream Pail.
Fairmount.....per doz. $3 75
Marking, Mortise, etc.....
.....Nets
Wire.
Disston's.....25%

GIMLETS.

Discount.....35@40%

GLUE.

Bulk.
B Amber.....per lb. 35c
A White..... " 40c
H. S. Amber..... " 32c
Liquid.
Army & Navy.....40%
Le Page's—
List "A".....37½%
List "B".....33⅓%
List "C".....25 %

GREASE, AXLE.

Wood Boxes.
Frazer's.....per gro. $13 00
Hub Lightning..... 7 50

Wood Pails.
Frazer's, 15lb.$1.00; 25 lb. $1.50 each
Hub Lightning, 15 lb. 90c; 25 lb $1.21 each.

Tin Cans.
Frazer's
1½lb. per doz.....$1 75
3 lb. per doz..... 3 25

GRINDSTONES.

Family.

Inches..	7	8	10	12
Per doz..	20 50	21 75	26 25	30 50

Loose.
Per ton..... Price on application
Mounted.
Ball Bearing..... 1 2 3
Each.....$4 75 5 00 5 25

GUN WADS.

(See Ammunition).

GUNS.

Iver Johnson Champion Single Barrel Shot Guns.....Net Prices
Double Barrel, Hammerless. "

HAFTS, AWL.

Brad.
Common.....per doz. $0 35
Peg.
Patent, plain top..... " 80
Patent, leather top... " 90
Sewing.
Common..... " 24
Patent..... " 55

HAMMERS, HANDLED.

per doz., net
Blacksmiths, Hand, No. 0, 26 oz. $11 11
Engineers', No. 1, 26 oz..... 11 11
Farriers', No. 6, 7 oz..... 7 23
Machinists', No. 1, 7 oz..... 6 65

Nail.
Vanadium, No. 41½, 16 oz., per doz.....$17 50
V., B., No. 11½, 16 oz. per doz. 13 95
Garden City, No. 111½, 16 oz., per doz..... 11 90
Tinner's Riveting, No. 1, 8 oz., per doz..... 9 40
Shoe, Steel, No. 1, 13 oz. per doz. 10 00

Tack
Magnetic.
Per doz..... $5 63

HAMMERS, HEAVY.

Heavy Hammers and Sledges.
Under 5 lbs.....50%
5 lbs. and over.....50&10%
Masons'.
Single and Double Face.....50%

HANDLES.

Auger.
Common Assorted....per doz. $0 75
Pratt's Adjustable, Nos. 1 & 2, per doz..... 6 00
Ives' Adjustable.....per set, 1 35
Axe.....30%

Chisel.
Hickory, Tanged, Firmer, Assorted, 55c; Large, 85c per doz.
Hickory, Socket Firmer, Assorted, 70c; Large size, 80c per doz.
Coal Pick.....40%
Drafting Pick.....40%
File, assorted, 30c; Large, 35c per doz

Hammer.
Adze Eye.....per doz. 40 to $1 00
Blacksmiths'... " 45c@1 00
Machinists'.... " 50c@1 00
Hay and Manure Fork.....25%

Screw Driver.
Assorted..... " 60
Large..... " 90
Shovel and Spade.....25%

HANGERS.

Barn Door.
U. S. Rolled Bearing.....12½%
Matchless.....12½%
Warehouse Tandem, No. 44...33⅓%
Conductor P.
Iwan's Perfection.....45%
Eave Trough.
All sizes. 5" or smaller, ...per gross. $3 80 Net
All sizes, larger than 5", ...per gross. 5 00 "
Garage Door.
Right Angle.....50&10%
Sliding Folding.....50%
Receding.....50%
Parlor Door.
Acme.....per set, $3 75
Ives' Improved..... " 3 40
Lane's Standard..... " 3 50
Lane's New Model... " 3 10
Le Roy Noiseless.....40&10%
Richards.....25%
Advance.....40&10%

HASPS.

Hinge, Wrought..... Add 50% to list.
With Staples—See Staples.

HATCHETS.

Crescent.....50%
Cast Claw.....per doz. $1 50@1 85
Cast Shingling... " 1 50@1 85
Germantown.....7½%

HAY KNIVES.

See Knives.

HAY RACK BRACKETS

Wenzleman's No.1 per doz. sets, $18 00
Wenzleman's No. 2 " " 19 20

HINGES.

Blind.
Clark's Gravity
No. 1.....per doz. sets, $2 25
No. 3..... " " " 5 75
Gate.

Clark's	1	2	3
Hgs & Ltch, doz.	$5 50	7 00	9 75
Hinges only "	4 75	5 50	8 00
Latches only.	1 90	1 90	....

Screen Door.
Cast Iron.....gross $10 00
Steel..... " 7 00

Spring.
Chicago.....Add 12½% to list.
Columbia Dbl. Acting...40&10&5%
Gem.....25%
Ideal Detachable...per gro. $11 00
Matchless.....40%
New Idea.....per gro. $7 20
Oxford.....20%

Wrought Iron.
New Lists.....
Light Strap Hinges.....5&5%
Heavy Strap Hinges.....20&7½%
Light T Hinges.....List plus 4%
Heavy T Hinges.....List plus 4%
Extra Heavy T Hinges.....15&5%

Screw Hook and Strap.
6 to 12 in.....per 100 lbs. $7 75
14 to 20 in..... " " 7 50
22 to 36 in..... " " 7 25

Screw Hook and Eye.
½ in.....per doz. pair $2 60
⅝ in..... " " 3 50
¾ in..... " " 5 00

HOES.

Garden.....Net

Grub.
Extra.....New prices
Hazel.....per doz. New prices
Ladies' and Boys'.....New prices
Mortar.....New prices
Planter's Eye.....New prices
Weed.....New prices

HOOKS.

Awning. No. 60.....per gro 50%
Belt.
Brown's.....70&5%
Jones'.....65&5%
Bench.
See Stops, Bench.

Box.
Inch..... 5 7 10 12
Per doz...$2 50 2 75 3 25 3 85

Bush.
Common Axe Handle, per doz.$22 00

Chain.
Inch.. ½&⅝ ¾ ⅞ 1
Pr 100 $7 60–8 10 9 75 11 50 12 60

Clothes Line.
Japanned.....per doz.48c @1 40
Galvanized..... " 75c@2 50

Coat and Hat.
Common Wire....per gro. 1 25-1 65

Conductor.
Iwan's Tinned Sickle..... List.

Corn.
Common, riveted, painted
red.....per doz. Nets
Little Giant..... " "

Gate.
See Goods, Bright Wire.

Grass.
Common Nos. 1 3 5 7
Per doz...$4 50 3 50 3 75 3 25

Hammock.
With plate.....per doz. 1 10
With screw..... " 1 00

Lambrequin, or Drapery, per gro...30c
Picture.....50%@50&10%
Potato and Manure.....Nets
Screw.
Brass.....70%
(See Goods, Bright Wire.)
Seat Spring.....per lb. 5½c

HOSE, GARDEN.

Per ft.
Guaranteed 3 ply ¾ inch .....16 c
" 4 ply ¾ inch 18½c
" 5 ply ¾ inch 13½c

COTTON COV. RUBBER HOSE.

High Grade Apache 1" guar. press.
400 lbs.....40o

HUSKERS.

Boss.
Nos..... B E
Per doz.....New Nets
No. 59.....per doz. New Nets

IRON, PIG.

See Metals.—First column.

IRONS.

Curling.
C.....per doz. $4 40
B..... " 50
A..... " 58
Princess..... " 1 25
Thelma..... " 1 25
Pinking..... " 1 00

Plane.
Wood Bench.....Add 10% to list

Sad.
Charcoal.....per doz. $11 00
Common, polished, per 100 lbs. 7 75
No. 70 Asbestos.....$1 50 net
No. 100 " ..... 1 75 net
Common, nickel plated..... 8 25
Mrs. Pott's,
No. 50 J, Enterprise, per set, Nets
No. 55 J, " " "
No. 50 T, " " "
No. 55 T, " " "
Tailors' Sad.....per lb "
Tailors' Goose..... " "

Ideal.
6 lb. Household.....$3 50
9 lb. Dressmakers'..... 4 25
14 lb. Tailors' Goose..... 5 50

Tayere.
Single Duck Nest....per doz. $5 25
Double Duck Nest .. " 6 25
Sutton..... ....each 2 60

JACKS.

Locomotive.....30%

Wagon.
Richard's No. 1.....per doz. $15 50
Miller..... 20 00

Oliver,
Nos..... 0 00
Each.....$0 60 $0 80

Standard,
Nos..... 1 2
Each.....$0 60 1 00
R-W
Big Lift.....40%
Tiger.....40%

KETTLES.

Brass.....15%
Cauldron.....40&5%
Copper.....per lb. 27
Maslin.....40&10%
Sugar.....50%

KNIVES.

Beet Topping.
Clyde, 9-in. Scimiter Blade, dz. $3 85
California..... 3 40
Butcher. Per doz.
Beechwood Handles, 6" blade..$4 00
" " 7" " ..4 65
" " 8" " .. 5 65
Cooper's Hoop.....15%

Corn.
Clipper.....per doz. $1 75
Disston's..... " 2 75
Earle's..... " 3 00
Woodford..... " 2 25

Drawing.
Standard .....List&5%
Adjustable.....15%
Barton's Carpenters'.....15%

Hay.
Iwan's Solid Socket.....doz.$13 00
Heath's..... " 13 00
Iwan's, Sickle Edge..... " 18 00
Iwan's, Impv'd Serrated. " 18 00

Hedge.
Challenge.....per doz. $6 00
Disston's..... " 3 75

Mincing.
Common, Single..... " 60
Common, Double.... " 90
Streeter, 4-blade..... " 1 30
Streeter, 6-blade..... " 2 00

Putty.
Common.....per doz. $0 75@1 50
Lander's..... " 1 75@2 50

Scraping.
Beech Handle..... 90@1 10
Lander's..... 5 50@6 50

KNOBS.

Doors.
Mineral.....per doz. $1 80
Porcelain..... " 1 90
Jet..... " 2 00

LADDERS.

Common Long.
Per ft.....17c@23c
Extension.
Per ft..... 22 to 28
Step.
Common, per ft.....23c
Common, with Shelf, add 10c.
IXL.....34c
Challenge, 6 to 9 ft.....55c
10 to 16 ft.....60c

LANTERNS.

Bull's Eye Police.
3 in. Flash Light...per doz. $13 00

LEADERS, CATTLE.

Nos..... 51 52
Per doz.....$1 35 1 45

LEATHER, LACE.

Rawhide ½".....100 ft. $2 60
" ¾"..... " 4 40

LEATHERS, PUMP.

Valve and Plunger.....10%

LIFTERS.

Stove Cover.
Coppered.....per gro. $3 25@5 50
Alaska..... " 8 00
Alaska..... " 10 00
Transom.
Payson's.....55%

LINES.

Chalk.
Twisted in 20-ft. hanks.
Nos. 4 6 7 8 9
Gro.....Prices on Application
Twisted in 50-ft. balls.
Nos..... 1 2 3 4
Per doz.....Prices on Application
Braided in 20-ft. hanks.
Nos..... 0 1 2 3
Per doz.....Prices on Application
Mason's..... " " "
Clothes.
60 ft. Jute.....per doz. $0 95
60-ft. Sisal..... " 40
50-ft. Cotton ..... " 15
50-ft. Braided Cotton " 25

LINING, STOVE.

Bricks.....per crate, 42c

LOCKS.

Barn Door.
No. 60 Stearns.....per doz. $10 00
No. 80 " ..... " 17 50

MACHINES.

Riveting.
Stearns No. 1.....per doz. $12 00
Tenoning.
No. 50 Peace's Spoke...each $11 50

MAIL BOXES.

See Boxes.

MALLETS.

Carpenters'.
Fibre Head, No. 2, per doz. $16 50
" No. 3 " 19 50
" No. 4 " 28 50
Round Hickory..... " $3 00– 5 00
" Lignumvitæ.. " 6 25–10 50
Square Hickory..... " 3 50–5 50
" Lignumvitæ.. " 8 00–12 00
Tinners'.
Hickory..... " 2 25

MATS.

Door.
National Rigid.....50&10&5%
Acme Steel Flexible.....50%
Stove.
No. 2.....per gro. Nets
No. 1..... " "
No. 1 Asbestos Toasters, or wire-covered Stove Mats, with handle.....per doz. 1 10
No. 2 Asbestos Toasters, with ring..... per doz .. 60

MATTOCKS.

Plumbs.....25%

MAULS.

Iron, lbs.... 10 13 16 18
Per doz.....Prices on Application
Wood Face, lbs..... 10 12 14
Per doz. .....Prices on Application
Wood Choppers'.
Lake Super'r & Oregon Pat. 40&5%

MEASURES.

Galvanized, doz.....Nets
Japanned, doz.....Nets

MILLS, COFFEE.

Enterprise.....16⅔%
Parker.....50&5%
Arcade.....40-10%

MITRE BOXES.

See Boxes.

MOPS

Cotton. Star (Cut Ends).
Pounds 12' 15' 18' 24'-3 oz.
Per doz. $4 50 5 65 6 75 9 00

MOWERS, LAWN.

Gladiator—B. B.
Inches..... 16 18 20
Each.....$6 50 7 25 8 00
King Universal—B. B.
Each.....$5 25 5 75 6 00
Inches..... 14 16 18
Big Giant.....$3 50 3 90 4 25

NAILS.

Cut Steel.....Prices on Application
Cut Iron..... " " "
Wire.
Small Lots ...Prices on Application
Cement Coated.
Small Lots....Prices on Application
Horseshoe.
Ausable..... 55&5%
Capewell.....15%
Perfect.....55&5%
Putnam.....20&5%
Star.....30&5%
Picture.
Brass Heads 25%
Brads.....50&5%
Furniture.....List plus 15%

NAIL PULLERS.

See Pullers.

NAIL SETS.

See Sets.

NETTING, POULTRY.

Galvanized before weaving.....50%
Galvanized after weaving.....45%

NIPPERS.

End Cutting.
Stubb's Pattern, Inches. 5 6
Per dozen.....$4 65 6 75
End and Diagonal Cutting.
Swedish Side. Inches.. 5 6
Per dozen.....$4 50 5 75
Hoof.
Heller's.....40&10%
V. & B.....55&5%

NOZZLES.

Hose.
Magic.....per doz. $9 50
Diamond..... " 5 75

NUTS, HOT PRESSED.

Square Tapped.
$1.85 off per 100 lbs.
Hexagon Tapped.
$1.85 off per 100 lbs.

OILERS

Chase Pattern.
Brass and Copper.....10%
Zinc.....33⅓%
Engineers'.
Tin.....per doz. $7 00@ 9 00
Machine.
Common.....per doz. $0 85

OPENERS.

Box.
See Box Chisels
Can.
Delmonico.....per doz. $1 30
Never Slip..... " 65
Crate.
V. & B..... " 7 25-11 00

OUTFITS, COBBLING

Combination.....per doz.$16 00
Economy..... " 8 50
Family..... " 14 50

PAILS.

Cream.
14-qt., without gauge, per doz. $9 50
18-qt., " " " 11 00
20-qt., " " " 11 75
Sap.
10-qt., IC Tin.....per doz. $4 00
12 " " " ..... " 5 50
Stock
Galv'd. qts. 14 16 18 20
Per doz...$9 75 10 75 12 75 14 50
Water.
Galvanized, qts.. 10 12 14
Per doz.....$5 75 6 50 7 25
Wood.
Cable, 2-Hoop.....per doz. Nets
Cable, 3-Hoop..... " Nets
Cedar, 3-Hoop, brass.. " Nets

PANS.

Dripping.....Net
Fry.
Common.....Nets
Acme..... "
Roasting.
Paxton,
Nos.... 1 2 3 4
Per doz.....Nets
Neverburn..... "
Savory No. 200.....per doz. $8 40

PAPER.

Building.
Plain.....per 100 lbs. Prices on Application
Tarred..... "
Tarred Felt..... "
Red Rosin, per ton.....$75 00
Sand and Emery.
No. 1, per ream, best grade.... $5 40
No. 1, per ream, cheaper grade. 4 85
Wrapping.
Express.....100 lbs. Nets

PARERS

Apple.

Goodell's.....per doz. $10 80
Turntable..... " 11 10
White Mountain.... " 8 40
Reading, No. 78.... " 11 40

Potato.

Goodsell's Saratoga, 10½ in., dz. 6 50
Goodsell's Saratoga, 5 in., dz. 5 50

PICKS.

Adze Eye Ore.....22½%
Drifting and Poll Picks.....22½%
Plumbs, Railroad.....22½%
Surface.....22½%

PINCERS.

Carpenters', cast steel.

Inches....	6	8	10	12
Per doz...	$3 75	4 75	6 25	7 00

Blacksmiths'.....45%
Heller's.....40%

PINS.

Clothes.

Common....per box of 5 gro. $0 95

Picket

Fluted, 15-in.....per doz. $1 10
Fluted, 21-in..... " 1 60
Spiral..... " 1 90

PIPE.

Conductor.

Plain Round and Round Corrugated
29 Gauge.....65%
28 " 55%
26 " 45%
24 " 20%
Square Corrugated A and B and Octagon.
29 Gauge.....50%
28 " 45%
26 " 35%
24 " 15%
Galvanized Toncan Metal, Genuine O. H. Iron, Lyonore Metal, Charcoal Iron and Keystone C. B.
Plain Round and Round Corrugated
28 Gauge.....50%
26 " 40%
24 " 15%
Square Corrugated A and B Polygon and Octagon.
28 Gauge.....45%
26 " 35%
24 " 15%
14 and 16 oz. Copper, all designs..20%

Portico Elbows.

Galvanized and Terne Steel.
1 -inch.....45%
1½-inch.....45%
1½-inch.....45%
2 -inch.....45%
Tubing.....40%
Discounts on Round apply on sizes 2 inch to 6 inch inclusive.
Freight allowed on 15 dozen or more Less than 15 dozen F. O. B. Factory
Terms: 30 days net, 2% ten days.
Standard Gauge Conductor Pipe, plain or corrugated.
Not Nested.....45-5%
Nested solid.....50% off

Stove. Per 100 Joints
29-Gauge, 3-inch.....$16 00
" 4-inch..... 16 50
" 5-inch..... 17 25
" 6-inch..... 18 00
" 7-inch..... 20 00
T-Joint Made-up.
6-inch.....per 100 $50 00

Furnace Pipe.

Double Wall Pipe and Fittings 20%
Single Wall Pipe, Round Pipe Fittings..... 15%
Galvan'd and Black Iron Pipe, Shoes, etc.....15%

PLANES.

Stanley Iron Bench.....net

PLATES, TIN.

See Metals in Column 1.

PLIERS.

Giant, Button's—Nets

Cutting.

Bernard's.....New Prices
Lodi.....New Prices
Paragon.....New Prices

Fencing.

Black Bull.....All Nets
Farmers' Choice.....All Nets
Russell's.....All Nets

Flat and Round Nose.

Bernard's.....New Prices
Lodi.....New Prices
Paragon.....New Prices

Tinners'.

Hollow.....Net list
Solid.....each, 10c

PLUMBS AND LEVELS.

Common.....Nets
Cook's.....40%
Davis' Iron.....25%
Davis' Inclinometer.....15%

POINTERS, SPOKE.

Stearns' No. 1.....per doz. $ 8 00
" No. 2..... " 10 00

POKERS, STOVE.

Wr't Steel, str't or bent per doz. $0 75
Nickel Plated, coil hanl's " 1 10

POLISH.

Metal.

Wizard, 6 oz.....per gross $18 00
" ½ pt..... " " 20 40
" 1 pt..... " " 36 00
" 1 qt..... " doz. 6 00
" ½ gal..... " " 10 80
" 1 gal..... " " 18 60

Stove. Per gross
Black Eagle Paste 5 oz.....$13 80
" " " ½ lb..... 17 40
" " " 1 lb..... 31 20
" " " 5 lbs. per case..... 5 25
Black Eagle Liquid, 6 oz. per gross..... 15 60
Black Kid Paste, 5 lbs. per case 6 00
Black Jack Liquid ½ pt. per gross..... 15 60
Black Jack Paste #10 per gross 13 20

FIRE POTS.

Clayton & Lambert's, each $4 00@6 00
Gate City.....each, 6 25
Gem.....each, $6 75@8 50

POWDER.

See Ammunition.

PRESSES, FRUIT AND JELLY.

Enterprise Manufacturing Co....25%

PRIMERS.

See Amunition.

PRUNERS.

Disston's Pole.....per doz. $18 00
Water's Improved..... " 60%

PULLERS.

Cork.

Daisy.....each, $3 10
Phœnix..... " 1 40
Quick and Easy..... " 2 70

Nail.

Giant.....per doz. 14 50
Never-Slip..... " 17 00

PULLEYS.

Awning—Jap'd.....10%
Clothes Line.....10%

Hay Fork.

Iron Wheel, 5-in.....per doz. 2 50
Wood Wheel, 6-in.... " 2 65
Wood Wheel, 6-in., pass knot, ...per doz. 3 00

Sash.

Common.....Net
Common-Sense, 2-in.....Net
Empire Pattern, 2-in.....Net
Ideal.....Net
Steel.....Net

PUMPS.

Pitcher Spout.

Nos.....	1	2	3	4
Each.....				Nets

Spray.

Midget Junior..... per doz. 3 75
New Misty..... " 6 00
Crescent..... " 6 50

PUNCHES.

Conductors.

No. 22.....per doz. $3 00
Machine.....per lb. 25

Saddlers'.

Common.....per doz. 1 50 to 5 00

Revolving Spring.

Stearns, No. 10.....per doz. $ 6 25
" No. 40..... " 12 00
" No. 60..... " 16 00

PUTTY.

Strictly pure.....per 100 lbs. $4 25

RAIL.

Barn Door.

Matchless, 1-in..... 5c
Matchless, 1½-in..... 7c
Storm King..... 5c

Sliding Door.

Bronzed wrought iron...per ft. 8½c

RAKES.

Garden. Per doz.
Steel, Bow, 12-inch Teeth.... $8 50
Steel, Bow, 14-inch " 9 25
Malleable Iron, 12-in. " 4 75
Malleable Iron, 14-in. " 5 00

Hay.

Wood, 10 Teeth.....$4 00

Lawn.

20 Teeth.....per doz. $5 50

RASPS—See Files.

RAZORS—SAFETY.

Gillette.....per doz. $45 00
Auto Strop..... " 45 00
Gem..... " 8 40
Gem (3 doz. lots)..... " 8 00
Ever Ready..... " 8 40
Ever Ready (3 doz. lots) " 8 00

RAZOR STROPS.

Star (Honing).....50%

REGISTERS.

Cast Iron.....10%
Steel and Semi-Steel.....20%
Solid Brass or Bronze Metal prices on application.....
Baseboard.....20%
Adjustable Ceiling Ventilators...20%

REGISTER FACES.

Japanned, Bronzed and Plated.
4x6 to 14x14.....20%
14x14 to 38x42.....40%

REVOLVERS.

Iver Johnson Safety Automatic Hammer..... New Nets
Hammerless..... "
I. J. Model 1900..... "

RINGS AND RINGERS.

Bull.

Copper.....	2½-in.	3-in.
Per doz.....	$2 40	$2 65

Rea's Improved Self-Piercing copper, doz. 3 40
Steel, per doz..... 1 50 1 80

Hog.

Blair's Rings.....per doz. $ 75
Blair's Ringers..... " 1 00
Brown's Rings..... " 72
Brown's Ringers..... " 1 00
Hill's Ringers..... " 1 00
Hill's Ring, boxes.... " 72
Major Rings..... " 60
Perfect Ringers..... " 1 50
Wolverine Rings..... " 1 65
Wolverine Ringers... " 1 10

Fruit Jar.

White.....per lb.....30c

Key.

Split, round.....per doz. $0 17
Split, square..... " 32
Ball, round..... " 40

RIVETS.

Copper Belt.....Add 15% to list
Coppered Iron.....30%
Tinners'.....30%
Hame.....per lb. $0 17
Slotted Clinch.....per doz. 60c@1 10
Tubular.
Nos. 1 and 2 assorted sizes, 50 in box.....doz. 75c
Nos. 1 and 2 assorted sizes, 10 in box.....doz. 1 40

RIVET SETS.

See Sets.

ROPE.

Cotton.

¼, 5-16 in. Com. on reels, per lb....85c
¼, 5-16 in. Com. in coils. " ...85c

Sisal

1st Quality.....19½c
No. 2.....17½c

Pure Manila.

1st Quality, base.....per lb. 28½c
Hardware Grade.....per lb. 27½c

RULES.

Prices on application
Lufkin's Hickory Board..... "
Lufkin's Log..... "
Lufkin's Boxwood..... "
Lufkin's Zigzag..... "

SAWS.

Band.
E. C. Atkins & Co. Prices on applic'n
Disston's.....Prices on applic'n

Buck.
Disston's.....Prices on applic'n
Jackson's..... New nets

Butchers'.
E. C. Atkins & Co. Prices on applic'n
Disston's.....Prices on applic'n

Circular.
E. C. Atkins & Co. Prices on applic'n
Disston's.....Prices on applic'n
Hiles'..... New nets

Compass.
E. C. Atkins & Co. Prices on applic'n
Disston's.....Prices on applic'n

Coping.
E. C. Atkins & Co. Prices on applic'n
Disston's.....Prices on applic'n

Cross-Cut.
E. C. Atkins & Co. Prices on applic'n
Disston's.....Prices on applic'n

Dehorning.
Disston's.....Prices on applic'n

Flooring.
E. C. Atkins & Co. Prices on applic'n
Disston's.....Prices on applic'n

Hack.
Disston's.....Prices on applic'n

Hand and Rip.
E. C. Atkins & Co. Prices on applic'n
Disston's No. 7...Prices on applic'n
Disston's Nos. 8, D8, 12, 76, 112, D100, and 120..Prices on applic'n
Keystone..... New nets

Keyhole.
E. C. Atkins & Co. Prices on applic'n
Disston's.....Prices on applic'n

Miter Box.
E. C. Atkins & Co. Prices on applic'n
Disston's.....Prices on applic'n

Panel.
E. C. Atkins & Co. Prices on applic'n
Disston's No. 7...Prices on applic'n

Patternmakers'.
E. C. Atkins & Co. Prices on applic'n
Disston's.....Prices on applic'n

Pruning.
Disston's.....Prices on applic'n

Stairbuilders'.
E. C. Atkins & Co. Prices on applic'n
Disston's.....Prices on applic'n

Wood.
E. C. Atkins & Co. Prices on applic'n
Disston's.....Prices on applic'n

SAW BUCKS—See Bucks.

SAW SETS—See Sets

SAW TOOLS—See Tools.

SAW FRAMES.

Common, plain.....per doz. $1 50
Common painted.... " 2 10

SCALES.

Counter.

Pelouze.....40&10%

SCISSORS.

Star.....60%

SCOOPS.

Grain.

½ bu. "Hercules"....per doz. 3 70
1-bu. "Hercules"..... " 5 00

SCRAPERS.

Box.

Triangular, No. 6....per doz. $6 25

Road.

Cubic ft.....	7	5	3
With runners, ea.	$7 00	6 50	6 20

SCREEN DOOR HINGES.

Cast iron.....gross, $13 00
Steel..... " 9 50

SCREWS.

Bench.

Iron, ins.	1	1½	1	1½
	$6 82	7 87	9 45	16 80

Wood, white maple...per doz. 6 00
Hand—Wood.....50%
Hand Rail.....22½%
Jack.....20%
Lag or Coach—all sizes, gimlet pointed.....45-5%

Saw—Centennial.

Nos.....	1	2	3	4
Per doz.....	47c	55c	75c	90c

Wood.

F. H. Bright.....70-10-10%
R. H. Blued.....65-10-10%
F. H. Jap'd.....62½-10%
F. H. Brass.....60&15%
R. H. Brass.....57½&15%
R. H. Nickel Plated.....57½-10%

SCYTHES.

Clipper, Grass.....per doz. $13 50
Honest Dutchman.... " 13 70

SETS.

Nail.
Square head..... per doz. $1 25
Cup point, knurled.. " 1 15

Rivet.
Farmers'.....per doz. $2 10
Tinners'.....25%

Saw.
Aiken's Pattern.....per doz. $6 50
Disston's Monarch... " 7 20
Disston's X-Cut..... " 13 50
Leach's..... " 80
Nash's Hand..... " 3 15
Nash's X-Cut..... " 4 20
Stillman's Lever..... " 1 30
Stillman's X-Cut..... " 2 50
Whiting Pattern, No. 21 " 5 75
Eccentric Anvil, Hand, No. 395, N. P. Morrill Pattern, ...per doz. 11 50

SHARPENERS, SKATE.

Diamond.....per doz. $1 60
Perfect..... 1 20

SHEARS.

Per Doz.
Nickel Plated, Straight, 6".... $12 90
" " " 7".... 14 85
" " " 8".... 16 30
Japanned, Straight 6".... 11 00
" " 7".... 12 40
" " 8".... 13 80

Tinners'—See Snips.

SHEAVES, SLIDING DOOR.

Common.

Inches....	3	4	5
Per set.....	$1 40	1 75	2 40

Hatfield's.

Per set....	$1 80	2 10	2 75	25

SHELLS—See Ammunition.

SHELLERS, CORN.

Union.....per doz. $6 75

SHIELDS.

Expansion Bolt Shields.....60%

SHOES.

Conductor.....60%

SHOT—See Ammunition.

SHOVELS AND SPADES.

Coal.
No. 2, Woodford.....per doz. $5 50
No. 182..... " 6 00
Ames', new list.....Discount, 12½%

Per doz.
Neverbreak, hollow bck, blk....Nets
National... " " ... "
Buckeye... " " ... "
Mohawk... " " ... "

Bar Drain & Ditching
Iwan's Perfection.....$30 00

Railroad, etc.

		Net
Black Diamond.....per doz.		
Crescent.....	"	"
Keystone.....	"	"
Star.....	"	"
Hollow Back.....	"	"

Ames', new list.....Discount, 12½%

Snow.
Galvanized, with wood handle, No. 56.....$1 45
No. 55..... 1 55

Alaska Steel.
D-Handle.....per doz. $3 50
Long Handle..... " 3 00

SINKS.

Cast Iron.
Painted, 16x24..... Net
Enameled, White, 16x24..... "

Wrought Steel.
Painted, 16x24..... "

SLEDGES—See Hammers.

SNAPS, HARNESS.

Covered Spring.....Add 30%
Judd's Pattern.....Add 33⅓% to list

SNATHS.

Double Ring, Bush.....per doz. $9 75
Patent Loop, Bush..... " 10 00
Patent Loop, Grass.... " 8 75

SNIPS, TINNERS'.

Clover Leaf.....40&10%
National.....40&10%
Star.....50%

SOLDER—See Metals.

SPRINGS, DOOR.

Perfect.

Nos.....	2	3	4	5	6	7
Per doz..	55c	60c	65c	75c	90c	1 00

Reliance.

	Light	Medium	Heavy
Per doz..	$1 55	2 10	3 20

Torrey's.....per doz. 1 65

SPRINKLERS, LAWN.

Stearns' No. 1.....per doz. $9 75

SQUARES.

Steel and Iron.....Nets new list
(Add, for bluing, $3.00 per doz., net.)
Miter.....
Try..... Nets
Try and Bevel.....
Try and Miter.....
Fox's.....per doz. $6 00
Winterbottom's.....10%

SQUEEZERS, LEMON.

Common Wood.....per doz. $0 70
Porcelain Lined, Wood. " 1 25
Boss, malleable iron.... " 1 20
Iron frame, porc'n bowl " 1 90
Iron Frame, glass bowl.. " 2 35
Little Giant, tin'd iron.. " 4 00
Drum, japanned..... " 3 60
Drum, nickel plated.... " 4 50

STAPLES.

Blind.
Barbed.....per lb. 21@22c

Butter Tub..... " 16@19c

Fence—
Polished.....per 100 lbs. $5 45
Galvanized..... " 6 15

Netting.
Galvanized.....per 100 lbs. 6 50

Wrought.
Wrought Staples, Hasps and Staples, Hasps, Hooks and Staples, and Hooks and Staples.....50&10%
Extra heavy.....35%

STEELYARD.

Discount 25%.

STONES.

Axe.
Hindostan.....per lb. New Nets
More Grit..... " "
Washita..... " "

Emery.
No. 126.....per doz. New Nets

Oil—Mounted.
Arkansas Hard No. 7 per doz. New Nets
Arkansas Soft..... " "
Washita No. 717... " "

Oil—Unmounted.
Arkansas Hard....per lb. New Nets
Arkansas Soft..... " "
Lily White..... " "
Queer Creek..... " "
Washita..... " "

Scythe.
Black Diamond....per gro. New Nets
Crescent..... " "
Green Mountain. " "
LaMoille..... " "
Extra Quinnebog. " "
Red End..... " "

STOPS, BENCH.

No. 10 Morrill pattern, per doz. $10 00
No. 11 Stearns " " 8 75
No. 15 Smith " " 6 50

STOPPERS, FLUE.

Common.....per doz. $1 10
Gem, flat, No. 3..... " 1 00
Gem, No. 1..... " 1 10

STOVE PIPE—See pipe.

STOVE BOARDS—See Boards.

STOVE POLISH—See Polish.

STRAPS.

Skate.....per doz. 85c & 1 20

STRETCHERS.

Carpet.
Bullard's.....per doz. $3 90
Excelsior..... " 5 25
Malleable Iron..... " 70
Perfection..... " 6 30
King..... " 4 50

Wire.
O. S. Elwood, No. 1...per doz. Nets
O. S. Elwood, No. 2.. " "

SWIVELS.

Malleable Iron.....per lb. $0 10
Wrought Steel.....per gro. 4 50

TACKS.

Bill Posters' 6-oz., 25 lb. boxes, per lb..... 15c
Upholsters' 6-oz., 25-lb. boxes, per lb 15½c

TAPES, MEASURING.

Asses' Skin..... List&40%
Lufkin's Steel..... Prices on applic'n
Lufkin's Metallic... Prices on applic'n
Lufkin's Pocket..... Prices on applic'n

THERMOMETERS.

Tin Case.....per doz. 80c@$ 1 25
Wood Back... " $2 00@ 12 00
Glass..... " 12 00

TIES.

Bale.
Single Loop, carload lots.....75&7%
" " less than car lots 70&15%

Cow—See "Chains."

TOOLS, SAW.

Disston's Universal.....40%

TRAPS.

Game with Chains. Per doz.
Victor No. 1.....$2 01
Oneida Jump No. 1..... 2 75
Newhouse No. 1..... 5 62

Mouse and Rat. Net per gross
Out O'Sight Mouse.....$ 8 00
" " Rat..... 15 00
" " Mole..... 100 00
#44 Pocket Gopher..... 20 00
Victor Mouse..... 2 60
Hold Fast Mouse..... 2 60
Victor Rat..... 11 00
Hold Fast Rat..... 11 00
Official Rat..... 13 50
Wood Choker Mouse, 4 Holes 11 00

TROWELS.

Brick.
Clover Leaf.....30%
Brade's..... .....15&5%
Disston's.....30%
Rose's..... Net

Plasterers'.
Clover Leaf.....40%
Disston's..... .....25%
W. & McP.....Net

TRUCKS.

Bag.....each, $3 75
Warehouse or store.
No 1, each.....$24 50
" 2, " 22 50

TUBS, WASH.

Standard, Wood, Ex.

Nos.....	3	2	1	large
Per doz..	$9 50	11 25	12 75	15 50

Galvanized.

No.....	1	2	3
Per doz.....	13 75	15 95	18 60

TWINE.

Market Quotation
3-ply Cotton Wrapping.....
" " .....
" Extra Wrapping.....
" " Hvy. Wrapping..
" " Wrapping on tubes...
" " cones...
" " " ...
India Hemp, ¼-lb. balls, No. 18..
2-ply Jute, 1-lb. balls.....

Seine. Market
Soft.....per lb ..... Quotation
Med..... " ..... "
Hard.... " ..... "
Staging, ¼-lb. ball, size 21..... "
" " " 24..... "
" " " 27..... "
Bagging, ¼-lb ball..... "
3-ply, "B" in hanks..... "
4- " "B" " ..... "
3- " "A" " ..... "
3- " Silver Finish, in hanks... "

Fodder or Lath.
130 strand.....

VISES.

No. 21, Hand..... $5 00
Oval Slide,

Inches	2	2½	3	3½	4½
Each..	$2.40	$2.60	$3.00	$3.75	$7.75

No. 1, Genuine Wentworth, Noiseless Saw.....per doz. 13 50
No. 2, Genuine Wentworth, Noiseless Saw.....per doz. 20 00
No. 3, Genuine Wentworth, Noiseless Saw.....per doz. 18 00
No. 500, All Steel Folding Saw .....per doz. 13 50

WARE.

Glue Pots.
Tinned.....Add 15% to list
Enameled.....30%

WASH BOARDS—See Boards.

WASHERS.

Standard O. G. cast iron...per lb. 3½c
Wrought steel in 5-lb. boxes, per lb.:

In.	3/16	¼	5/16	⅜	½	⅝	¾	1
	18c	16c	15c	13c	12c	11½c	11c	11c

WEDGES.

Axe.....per doz. Nets
Galling.....per lb. "
Saw..... " 8½

WEANERS.

Calf.
Fuller's, per doz.....$2 00 to $2 50
Tyler's Safety, per doz. 1 85 to 2 40
Carroll's, per doz.... 3 00 to 3 75
Hoosier, per doz..... 3 50 to 4 60
Shaw Perfected..... 3 00 to 3 75

WEIGHTS.

Hitching.....per lb. Nets
Sash—f.o.b. Chicago
Ton lots, per ton.....$60 00
Smaller lots, per ton..... 63 00

WHEEL BARROWS.

No. 4 Tubular Steel..... @ $7 25
Common Tray or Stave Tray @ 2 75
Angle leg, garden..... @ 4 [illegible]

WHEELS.

Carborundum.....50%
Emery.....60%
Well. Ins..... 8 10 12
Per doz.....$5 50 7 25 8 50
12 in. heavy hoisting, per doz. $25 00

WIRE

Brass.
In coils.....Nets
In 1-lb. spools, new list.....Nets

Broom—Tinned.....Nets

Cable—Same price as Barbed Wire.

Copper.
In coils.....Nets
1-lb. spools, new list.....Nets

Fence—Smooth. An'eal'd Galv'd
Nos. 6 to 9, less than car, per 100 lbs....$4 25 $4 95

Hair—New List.....40&10%

Market. Market Quotations
Bright, full bdles..... "
Bright, broken bdles..... "
Coppered, full bdles..... "
Coppered, broken bdles..... "
Tinned, full bdles..... "
Tinned, broken bdles..... "

Picture—In coils.....80%@80&10%
In 5-lb. spools.....per lb.....26c

WRENCHES.

Coes Steel Handle, 6 inch..... 30%
" " " 8 " 30%
" " " 10 " 30%
" " " 12 " 30%
Coes Knife-Handle, 6 " 30%
" " " 8 " 30%
" " " 10 " 30%
" " " 12 " 30%
Coes All Patterns..... 30%
Bemis & Call's:
Adjustable S, 10%; Adjustable S Pipe, 10%; Briggs' Pattern, 25%
Combination Bright.....10%
Steel Handle Nut.....25%
Combination Black.....25&5%
Merrick Pattern.....25&5%

Knife Handle Pattern.
No. 62, Screw Wrench. List, plus 5%
No. 60, Steel Handle.

WRINGERS.

No. 790, Guarantee....per doz. $67 00
No. 770, Bicycle..... " 62 50
No. 110, Domestic.... " 55 50
No. 110, Brighton..... " 51 00
No. 740, Bicycle..... " 62 50
No. 22, Domestic.... " 55 50
No. 22, Pioneer..... " 51 00
No. 770B, Bicycle..... " 101 00
No. 781B Guarantee... " 111 00

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